

**APPENDIX F**  
**SUMMARY REPORT ON WATER QUALITY**  
**AND ANALYSIS FOR WATER ENTERING**  
**LAKE PONTCHARTRAIN DURING UNWATERING**  
**OF NEW ORLEANS, LOUISIANA**



**U.S. Army Corps of Engineers**  
**New Orleans District**

**Summary Report on Water Quality Sampling and Analysis for  
Water Entering Lake Pontchartrain During Unwatering of  
New Orleans, Louisiana**

**April 2006**

## TABLE OF CONTENTS

### EXECUTIVE SUMMARY

1. BACKGROUND
2. DATA COLLECTION
  2. a. SCHEDULE
  2. b. SAMPLING
3. EVALUATION OF RESULTS
4. CONCLUSIONS

### TABLES

<u>Table 1:</u>	Pumping Stations
<u>Table 2:</u>	USEPA Proposed Benchmarks
<u>Table 3:</u>	Water Quality Analysis Results – 17 <sup>th</sup> Street Canal
<u>Table 4:</u>	Water Quality Analysis Results – Pumping Station #12
<u>Table 5:</u>	Water Quality Analysis Results – Orleans Canal
<u>Table 6:</u>	Water Quality Analysis Results – London Canal
<u>Table 7:</u>	Water Quality Analysis Results – Inner Harbor Navigation Canal
<u>Table 8:</u>	Water Quality Analysis Results – Pumping Station #16 (St. Charles)
<u>Table 9:</u>	Water Quality Analysis Results – Pumping Station #10 (Citrus)
<u>Table 10:</u>	Water Quality Analysis Results – Pumping Station #14 (Jahncke)
<u>Table 11:</u>	Field Data

### FIGURES

<u>Figure 1:</u>	Map of Sample Sites, Pumping Stations Locations, and Aerator Locations
------------------	--

### APPENDIX

<u>Appendix A:</u>	Water Quality Management Plan
<u>Appendix B:</u>	Daily Field Logs and Analytical Reports

## EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers was responsible for the pumping operations to unwater the City of New Orleans and the surrounding areas that flooded due to Hurricanes Katrina and Rita. During the unwatering, the U.S. Environmental Protection Agency and Louisiana Department of Environmental Quality collected data for assessment of water and sediment quality conditions at many locations within the City of New Orleans including in the canals that were discharging into Lake Pontchartrain and in the lake proper. The U.S. Geological Survey also collected data in Lake Pontchartrain for the evaluation of bacteriological water quality. In mid-September 2005, the U.S. Environmental Protection Agency determined it was necessary to analyze water quality samples for additional parameters from each of the pump outflows (10) and the canal outfalls into Lake Pontchartrain (8) to monitor the quality of the floodwater being pumped out of the City. The additional sampling was to ensure that floodwater discharges were managed appropriately and that, as much as practicable, the designated uses of Lake Pontchartrain were not compromised. On 27 September 2005, the U.S. Environmental Protection Agency proposed benchmarks for five water quality parameters (See [Table 2](#)). The U.S. Army Corps of Engineers responded by developing and implementing a water quality management plan, *Water Quality Management Plan for Protecting Lake Pontchartrain During U.S. Army Corps of Engineers' Unwatering Mission Following Hurricanes Katrina and Rita, Orleans Parish, Louisiana*, provided as [Appendix A](#). This report presents and summarizes the data collected from 6-31 October 2005 relative to the proposed benchmarks.

There were nine pumping stations of interest that discharge to Lake Pontchartrain or the Inner Harbor Navigation Canal (See [Table 1](#)). Seventeen sample sites were identified for collection of water and analysis of the five water quality parameters. The results for the sample sites at the intersection of the canal outfalls and Lake Pontchartrain (SW02, SW04, SW05, SW09, SW13, SW15, and SW17) characterized the quality of the water, relative to the benchmarks, discharged into the Lake. These sites show the water quality conditions within a mixing-zone scenario of the canal outfall and Lake Pontchartrain (See [Figure 1](#)).

Overall, Chemical Oxygen Demand and Total Suspended Solids were the only parameters that exceeded the U.S. Environmental Protection Agency's proposed benchmarks during the 26-day sampling program except for one occurrence for the laboratory pH and one occurrence for oil and grease. For the canal outfall sample sites previously listed, there were six occurrences of Chemical Oxygen Demand and six occurrences of Total Suspended Solids exceeding their respective benchmarks. Oil and grease were not detected, i.e., below the laboratory reporting limit of 5 mg/L, in the majority of the samples with only one exceedance while there were no occurrences of Total Organic Carbon exceeding the proposed benchmark for that parameter. Refer to Tables 3 through 10 for the dates and concentrations.

The sample analyses were conducted daily to provide the data necessary to manage the operation of the unwatering mission. These data were useful for managing the

unwatering mission; however, they alone are not useful for long-term assessment of the impacts due to the unwatering operation. Therefore, this data analysis and summary does not predict long-term effects. Relative to the proposed benchmarks, the data for the floodwater pumped into Lake Pontchartrain during the unwatering operation from 6-31 October 2005 were acceptable and did not cause a reason for concern during the pumping operations.

## 1. BACKGROUND

The U.S. Army Corps of Engineers (USACE) was responsible for the pumping operations to unwater the City of New Orleans and the surrounding areas that flooded due to Hurricanes Katrina and Rita. On 27 September 2005, the United States Environmental Protection Agency (USEPA) proposed benchmarks for five water quality parameters of the floodwater entering Lake Pontchartrain. These included:

- Total Organic Carbon (TOC) 50 mg/l
- Chemical Oxygen Demand (COD) 100 mg/l
- Oil and Grease 15 mg/l
- pH Range 6.0 – 9.0 Standard Units
- Total Suspended Solids (TSS) 85 mg/l/100mg/l/135 mg/l

Initially, there were ten pumping stations of interest that discharge to Lake Pontchartrain or the Inner Harbor Navigation Canal (See [Table 1](#)). The levels of the benchmarks listed above were not expected to be static over the duration of the unwatering effort. Salinity plays a primary role on the TOC and TSS of water as well as a secondary role on the two related measurements COD and oil and grease. The initial draw down of water during the unwatering following multiple levee breaches involved the removal of high salinity water (2.5 to 7.0 parts per thousand salinity). The high salinity waters coupled with the settling obtained during the drawing from areas of standing water resulted in relatively clear water entering the Lake. As the salinity of the water being removed from the City decreased and the water surface velocity increased, it was expected that one or more of the water quality benchmarks would be exceeded.

**Table 1: Pumping Stations**

Pumping Station ID	Capacity (cfs) <sup>3</sup>	Total Pumps
#6 (17 <sup>th</sup> Street)	9,480	15
I-10 <sup>1</sup>	860	4
#12	1,000	1
#7 (Orleans)	2,690	7
#3 (London Avenue)	4,260	7
#4 (London Avenue)	3,720	6
#19 <sup>2</sup>	3,650	5
#16 (St. Charles)	1,000	4
#10 (Citrus)	1,000	4
#14 (Jahncke)	1,200	4

<sup>1</sup>I-10 Pumping Station not sampled due to access issues

<sup>2</sup>#19 discharges to the Inner Harbor Navigation Canal (IHNC)

<sup>3</sup>cfs = cubic feet per second

## 2. DATA COLLECTION

The USEPA and Louisiana Department of Environmental Quality (LDEQ) collected data for assessment of water and sediment quality conditions at many locations within the City of New Orleans including in the canals discharging into Lake Pontchartrain and in the lake proper. The United States Geological Survey (USGS) also collected data in Lake Pontchartrain for the evaluation of bacteriological water quality. It was proposed that additional water quality samples were needed from each of the pump outflows (10) and the canal outfalls into Lake Pontchartrain (8) to monitor the quality of the floodwater being pumped out of the City with respect to the proposed water quality parameters listed in [Table 2](#). The number of pump outflows sampled was reduced to nine after it was determined that the outflow of the I-10 Pumping Station was inaccessible. This pumping station discharges to the 17<sup>th</sup> Street Canal, which was sampled at the canal outfall providing characterization of the discharge from Pumping Station #6 and the I-10 Pumping Station. Seventeen sample sites were identified for collection of water and analysis of the five water quality parameters.

The goal of the sampling program was to collect the necessary data to monitor the water being pumped into Lake Pontchartrain and compare the results to the USEPA's proposed benchmarks to ensure that floodwater discharges were managed appropriately and that, as much as practicable, the designated uses of Lake Pontchartrain were not compromised. The sample analyses were conducted daily to provide the data necessary to manage the operation of the unwatering mission. The analyses that were conducted are listed in [Table 2](#). The proposed benchmarks were provided to the USACE by the USEPA and were based on effluent concentrations/permit limits of lagoon systems and stormwater discharge for industrial facilities.

**Table 2: USEPA Proposed Benchmarks**

Parameter	Analytical Method	Proposed Benchmarks
Total Organic Carbon (TOC)	9060	50 mg/L
Chemical Oxygen Demand (COD)	0410.4	100 mg/L
pH	9040	6-9
Oils and Grease	1664 <sup>1</sup>	15 mg/L
Total Suspended Solids	0160.2	85 <sup>2</sup> /100 <sup>3</sup> /135 <sup>4</sup> mg/L

<sup>1</sup> Method 1664: n-hexane extractable material (HEM)

<sup>2</sup> 85 mg/L benchmark based on reported annual event mean for Jefferson Parish, LA industrial stormwater runoff.

<sup>3</sup> 100 mg/L benchmark based on median value from National Urban Runoff Program Multi-Sector General Permit for Industrial Stormwater.

<sup>4</sup> 135 mg/L benchmark based on lagoon systems effluent. TSS benchmark of 135 mg/L used to evaluate results.

a. SCHEDULE

Samples were collected daily with sampling commencing on 6 October 2005 and ending on 31 October 2005. The Contractor was required to accommodate this schedule so that data characterizing runoff from rain events were captured.

It was anticipated that one or more of the benchmarks would be exceeded when stormwater runoff flowed through the stormwater collection system and ultimately to Lake Pontchartrain. However, New Orleans did not receive significant rainfall during the sampling program. During the month of October 2005 and the coinciding sampling program, an estimated 0.04 inch of rain was recorded at the New Orleans International Airport according to the Louisiana State University Southern Regional Climate Center. This small amount of rainfall resulted in fewer benchmark exceedances than were initially anticipated.

b. SAMPLING

The USACE Contractor, Shaw Environmental and Infrastructure Inc., was responsible for collecting and analyzing water samples from the 17 locations. The Contractor organized two teams to collect grab samples for analysis of the proposed benchmarks as well as record water temperature, weather conditions, pumping status, and other pertinent environmental parameters during sampling at each station. These data are located in [Table 11](#). Team 1 collected samples from sample sites SW10, SW11, SW12, SW13, SW14, SW15, SW16, and SW17 while Team 2 collected samples from sites SW01, SW02, SW03, SW04, SW05, SW06, SW07, SW08, and SW09. Samples were collected, stored, and analyzed in accordance with the analytical methods listed in [Table 2](#) and using appropriate chain of custody procedures.

According to the Contractor, Team 2 had an issue with the pH meter they were using in the field. For several days early on in the sampling, the readings were lower than expected when compared to the laboratory pH readings; therefore, a second meter was brought into the field for verification. The Contractor determined that the field pH readings were not valid and suggested using the laboratory pH readings for benchmark comparison. This approach is acceptable since the samples were analyzed usually the same day they were collected, therefore, avoiding larger than usual differences between field and laboratory readings that would be due to chemical changes from microbial activity and other factors.

The Contractor was required to sample the outflow from the pumping stations when the pumps were operational. When the pumps were not



operating, the samples were collected from the canal at the pumping station outfall location. Therefore, the sample may not necessarily represent the effluent of the pumping station. Rather, the sample would represent the receiving water in the canal, which could have water from an upstream pumping station. It was discovered and noted by the Contractor that the only pumping stations that could accommodate direct sampling of the pump outflow/discharge were Pumping Stations #3, #4, #6, and #19. Since the goal of this sampling effort was to characterize the water entering Lake Pontchartrain for comparison to the proposed USEPA benchmarks, the collection of samples in the canals rather than the pump outflow does not compromise the quality of the data for this analysis.

### 3. EVALUATION OF RESULTS

The daily, analytical results for each sample site are presented in Tables 3 through 10 and are summarized below. The data are grouped and presented in the tables and the narrative to represent each canal/outfall into Lake Pontchartrain. The data were compared to the benchmarks proposed by the USEPA and listed in [Table 2](#). The data tables provide the pumping station ID, the sample date, the results of the five parameters (six columns total including field pH and laboratory pH), the status of the pumping station at the time of sampling, and the number of aerators deployed in the canal at time of sampling. It should be noted that the sampling technique was grab samples and not continuous samples; therefore, the pump status only accounts for the time of sampling. A status of “off” does not necessarily mean the pumps did not operate the day of sampling.

Overall, COD and TSS were the only parameters that exceeded their respective benchmarks except for one occurrence for the laboratory pH and one occurrence for oil and grease. Oil and grease were non-detects in the majority of the samples while TOC never exceeded the proposed benchmark. The data are summarized below.

#### **17<sup>th</sup> Street Canal:**

Pumping Station #6 discharges into the 17<sup>th</sup> Street Canal at a capacity of 9,480 cfs. The I-10 pumping station also discharges into the 17<sup>th</sup> Street Canal at a capacity of 860 cfs but was not sampled at the pump outflow due to access issues. During the sampling program, Pumping Station #6 was operating at the time of sampling two days, 7 October and 8 October 2005, out of the 26 days of the program. There were a total of six aerators deployed in the 17<sup>th</sup> Street Canal including three north of Veterans Highway and three at the mouth of the canal outfall to Lake Pontchartrain.

Data from two sample sites, SW06 and SW02, were collected and analyzed for the proposed benchmarks between 6 October and 31 October 2005. These data are presented in [Table 3](#). The six aerators were located between sites SW06 and SW02 (See [Figure 1](#)). At SW06, two of the benchmarks were exceeded including TSS and COD. Several of the field pH readings for SW06 and SW02 indicated very acid

conditions. However, as stated previously, Team 2 had technical issues with the pH meter in the field causing the Contractor to determine the field pH readings to be invalid. The laboratory pH readings did not fall outside of the benchmark range during the sampling program for either of the sample sites in the 17<sup>th</sup> Street Canal. All results of oil and grease were non-detects.

### **Pumping Station #12:**

Pumping Station #12 receives drainage from an area east of the 17<sup>th</sup> Street Canal, but it is not connected hydraulically to the 17<sup>th</sup> Street Canal or to Pumping Station #6. Pumping Station #12 has a capacity of 1,000 cfs and was not operating at the time of sampling for any days during the sampling program. There were no aerators deployed in the canal for Pumping Station #12.

Data from two sample sites, SW03 and SW04, were collected and analyzed for the proposed benchmarks. These data are presented in [Table 4](#). At SW03, three of the benchmarks were exceeded including COD, oil and grease, and TSS. At SW04, three of the benchmarks were exceeded including COD, pH, and TSS. As discussed previously, several of the field pH readings indicated very acid conditions; however, the laboratory pH readings only fell outside of the benchmark range once for SW04.

### **Orleans Canal:**

Pumping Station #7 discharges into the Orleans Canal at a capacity of 2,690 cfs. During the sampling program, Pumping Station #7 was operating at the time of sampling one day, 7 October 2005, out of the 26 days of the program. There were a total of six aerators deployed in the Orleans Canal including three at Robert E. Lee Boulevard and three at the mouth of the canal outfall to Lake Pontchartrain.

Data from two sample sites, SW01 and SW05, were collected and analyzed for the proposed benchmarks. These data are presented in [Table 5](#). The six aerators were located between sites SW01 and SW05 (See [Figure 1](#)). At SW01, none of the benchmarks were exceeded. At SW05, two of the benchmarks were exceeded including COD and TSS. As discussed previously, several of the field pH readings indicated very acid conditions; however, the laboratory pH readings did not fall outside of the benchmark range. All but one result of oil and grease were non-detects.

### **London Canal:**

Pumping Stations #3 and #4 discharge into the London Canal at capacities of 4,260 cfs and 3,720 cfs, respectively. During the sampling program, Pumping Station #4 was operating at the time of sampling one day, 8 October 2005, out of the 26 days of the program. Pumping Station #3 was not operating any of the days at the time of

sampling. There were a total of six aerators deployed in the London Canal including three just north of Pumping Station #3 and three at Lakeshore Drive, which is upstream of the mouth of the canal outfall to Lake Pontchartrain.

Data from three sample sites (SW07, SW08, and SW09) were collected and analyzed for the proposed benchmarks. These data are presented in [Table 6](#). Three of the aerators were located between sites SW07 and SW08, and the other three were located between SW08 and SW09 (See [Figure 1](#)). At SW07, one of the benchmarks (COD) was exceeded. At SW08, none of the benchmarks were exceeded. At SW09, two of the benchmarks were exceeded including COD and TSS. As discussed previously, several of the field pH readings indicated very acid conditions; however, the laboratory pH readings did not fall outside of the benchmark range. All results of oil and grease were non-detects.

#### **Inner Harbor Navigation Canal:**

Pumping Station #19 discharges into the IHNC at a capacity of 3,650 cfs. During the sampling program, Pumping Station #19 was operating at the time of sampling three days (11, 19, and 25 October 2005) out of the 26 days of the program. There were no aerators deployed in the IHNC.

Data from two sample sites, SW11 and SW10, were collected and analyzed for the proposed benchmarks. These data are presented in [Table 7](#). At SW11, one of the benchmarks (COD) was exceeded. At SW10, none of the benchmarks were exceeded. As discussed previously, several of the field pH readings indicated very acid conditions; however, the laboratory pH readings did not fall outside of the benchmark range. All but one result of oil and grease were non-detects.

#### **Pumping Station #16 (St. Charles):**

Pumping Station #16 discharges into Lake Pontchartrain at a capacity of 1,000 cfs. During the sampling program, Pumping Station #16 was not operating at the time of sampling for any of the days out of the 26 days of the program. There were a total of three aerators deployed at the pumping station outfall into Lake Pontchartrain.

Data from two sample sites, SW12 and SW13, were collected and analyzed for the proposed benchmarks. These data are presented in [Table 8](#). The three aerators were located at the pumping station outfall into Lake Pontchartrain with SW13 representing the mixing zone of the pump discharge and receiving water after aeration by the three aerators (See [Figure 1](#)). At SW12 and SW13, one benchmark (COD) was exceeded. As discussed previously, several of the field pH readings indicated acid conditions; however, the laboratory pH readings did not fall outside of the benchmark range. All results of oil and grease were non-detects.

#### **Pumping Station #10 (Citrus):**

Pumping Station #10 discharges into Lake Pontchartrain at a capacity of 1,000 cfs. During the sampling program, Pumping Station #10 was operating at the time of sampling one day (24 October 2005) out of the 26 days of the program. There were a total of three aerators deployed for Pumping Station #10.

Data from two sample sites, SW14 and SW15, were collected and analyzed for the proposed benchmarks. These data are presented in [Table 9](#). The three aerators were placed upstream of the pumping station with one upstream of SW14 and two downstream of SW14. Sample site SW15 was located at the pumping station outfall into Lake Pontchartrain representing the mixing zone of the pump discharge and receiving water of the lake (See [Figure 1](#)). At SW14, two of the benchmarks were exceeded including COD and TSS. At SW15, one of the benchmarks (TSS) was exceeded. The laboratory pH readings did not fall outside of the benchmark range, and all results of oil and grease were non-detects.

#### **Pumping Station #14 (Jahncke):**

Pumping Station #14 discharges into Lake Pontchartrain at a capacity of 1,200 cfs. During the sampling program, Pumping Station #14 was operating at the time of sampling eight days (7, 13, 14, 19, 25, and 28-30 October 2005) out of the 26 days of the program. There were a total of three aerators deployed for Pumping Station #10.

Data from two sample sites, SW16 and SW17, were collected and analyzed for the proposed benchmarks. These data are presented in [Table 10](#). The three aerators were located upstream of the pumping station. Sample site SW16 was located upstream of the three aerators while sample site SW17 was located at the pumping station outfall into Lake Pontchartrain representing the mixing zone of the pump discharge and the receiving water of the lake (See [Figure 1](#)). At SW16, one of the benchmarks (COD) was exceeded several days of the sampling program. At SW17, two of the benchmarks were exceeded including COD and TSS. The laboratory pH readings did not fall outside of the benchmark range, and all results of oil and grease were non-detects.

#### **4. CONCLUSIONS**

Overall, COD and TSS were the only parameters that exceeded the USEPA's proposed benchmarks during the sampling program except for one occurrence for the laboratory pH and one occurrence for oil and grease. Oil and grease were not detected, i.e., below the laboratory reporting limit, in the majority of the samples while there were no occurrences of TOC exceeding the proposed benchmark for that parameter.

The goal of this study was to collect the necessary, daily data to monitor the water being pumped into Lake Pontchartrain and compare the results to the USEPA's proposed benchmarks. Ultimately, the results for the sample sites at the intersection of the canal outfalls and Lake Pontchartrain (SW02, SW04, SW05, SW09, SW13,

SW15, and SW17) characterize the quality of the water, relative to the benchmarks, being discharged into the Lake. These sites show the water quality conditions within a mixing-zone scenario of the canal outfall and Lake Pontchartrain. Note, it was not required for mixing zones to be calculated for the discharges. This term is used to qualify the conditions at the point of sampling; not to quantify the conditions in a regulatory context. SW10 is not included in the outfall sample sites list above since this site does not represent the quality of the water that was discharged from Pumping Station #19 or the mixing zone of the outfall at the Lake for Pumping Station #19. The connectivity of the IHNC, the Mississippi River Gulf Outlet/Gulf Intracoastal Waterway, Lake Pontchartrain, and ultimately the Gulf of Mexico is complex and tidally influenced. A grab sample at SW10 does not represent the quality of the floodwater being discharged at Pumping Station #19 or the water quality conditions seen in the mixing-zone scenario at the other sites.

For the outfall sample sites, the proposed benchmarks were exceeded a total of thirteen times. They are as follows:

<u>Outfall Sample Site</u>	<u>Number of Times Benchmarks Exceeded</u>
SW02	0
SW04	4
SW05	2
SW09	3
SW13	1
SW15	1
SW17	2

The benchmarks exceeded included COD (6), TSS (6), and laboratory pH (1). Refer to Tables 3 through 10 for the dates and concentrations.

The sample analyses were conducted daily to provide the data necessary to manage the operation of the unwatering mission. These data were useful for managing the unwatering mission, however, they alone are not useful for long-term assessment of the impacts due to the unwatering operation. Therefore, this data analysis and summary does not predict long-term effects. Relative to the proposed benchmarks, the data for the floodwater pumped into Lake Pontchartrain during the unwatering operation between 6 October and 31 October 2005 were acceptable and did not cause a reason for concern during the pumping operations.

Table 3: Water Quality Analysis Results  
17<sup>th</sup> Street Canal

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #6 (Pump Outflow)	SW06	1	6-Oct-05	21	5	7.12	7.48	7.8	280	off	3*
	SW06	2	7-Oct-05	34	5	7.78	7.12	8.5	20	on	3*
	SW06	3	8-Oct-05	20	5	5.88	7.44	8.5	20	on	3*
	SW06	4	9-Oct-05	65	5	6.92	7.15	7.2	14	off	3*
	SW06	5	10-Oct-05	26	5	6.30	7.25	8.1	11	off	3*
	SW06	6	11-Oct-05	51	5	5.15	7.22	7.4	15	off	3*
	SW06	7	12-Oct-05	20	5	5.37	7.32	7	10	off	3*
	SW06	8	13-Oct-05	20	5	6.31	7.54	7.2	12	off	3*
	SW06	9	14-Oct-05	56	5	6.57	7.43	6.2	9	off	3*
	SW06	10	15-Oct-05	22	5	5.23	7.41	7.3	18	off	3*
	SW06	11	16-Oct-05	24	5	6.57	7.55	7.8	11	off	3*
	SW06	12	17-Oct-05	20	5	6.22	7.34	6.8	10	off	3*
	SW06	13	18-Oct-05	20	5	4.89	7.36	7.3	14	off	3*
	SW06	14	19-Oct-05	24	5	6.52	7.40	6.9	11	off	3*
	SW06	15	20-Oct-05	58	5	7.42	7.34	8.1	18	off	3*
	SW06	16	21-Oct-05	48	5	7.15	7.36	8.8	10	off	3*
	SW06	17	22-Oct-05	20	5	7.24	7.59	5.7	6	off	3*
	SW06	18	23-Oct-05	40	5	7.42	7.59	5.9	5	off	3*
	SW06	19	24-Oct-05	20	5	7.58	7.73	4.7	6	off	3*
	SW06	20	25-Oct-05	20	5	7.36	7.67	5.1	7	off	2*
	SW06	21	26-Oct-05	200	5	8.04	7.70	6.2	11	off	3*
	SW06	22	27-Oct-05	20	5	7.21	7.70	5.2	10	off	2*
	SW06	23	28-Oct-05	75	5	7.07	7.35	11	13	off	NA
	SW06	24	29-Oct-05	27	5	7.16	7.74	6.4	6	off	NA
	SW06	25	30-Oct-05	51	5	7.18	7.70	6.3	12	off	NA
	SW06	26	31-Oct-05	46	5	7.79	7.53	7.2	15	off	NA
17th St (Canal Outfall)	SW02	1	6-Oct-05	20	5	7.10	7.40	10	73	NA	3**
	SW02	2	7-Oct-05	26	5	7.37	7.68	8.9	120	NA	3**
	SW02	3	8-Oct-05	25	5	5.32	7.72	7	47	NA	3**
	SW02	4	9-Oct-05	33	5	6.16	7.46	7.3	59	NA	3**
	SW02	5	10-Oct-05	35	5	5.70	7.27	7.4	18	NA	3**
	SW02	6	11-Oct-05	20	5	4.98	7.24	7.2	25	NA	3**
	SW02	7	12-Oct-05	20	5	5.08	7.30	6.6	30	NA	3**
	SW02	8	13-Oct-05	22	5	5.19	7.79	7.2	9	NA	3**
	SW02	9	14-Oct-05	39	5	5.95	7.48	7.3	20	NA	3**
	SW02	10	15-Oct-05	39	5	5.31	7.90	6.6	23	NA	3**
	SW02	11	16-Oct-05	55	5	5.84	7.67	6.5	56	NA	3**
	SW02	12	17-Oct-05	20	5	5.72	7.36	6.7	24	NA	3**
	SW02	13	18-Oct-05	36	5	5.35	7.45	6.5	21	NA	3**
	SW02	14	19-Oct-05	40	5	5.84	7.50	6	59	NA	3**
	SW02	15	20-Oct-05	27	5	7.10	7.53	7.6	20	NA	3**
	SW02	16	21-Oct-05	56	5	7.13	7.66	4.8	23	NA	3**
	SW02	17	22-Oct-05	44	5	7.20	7.65	3.9	77	NA	3**
	SW02	18	23-Oct-05	33	5	7.62	7.73	4.6	23	NA	3**
	SW02	19	24-Oct-05	30	5	7.20	7.65	5.3	110	NA	3**
	SW02	20	25-Oct-05	20	5	7.13	7.75	5.1	28	NA	3**
	SW02	21	26-Oct-05	32	5	7.85	7.76	6.3	33	NA	3**
	SW02	22	27-Oct-05	20	5	6.82	7.74	4.9	59	NA	3**
	SW02	23	28-Oct-05	91	5	7.02	7.71	6.5	41	NA	NA
	SW02	24	29-Oct-05	53	5	7.07	7.50	7.6	23	NA	NA
	SW02	25	30-Oct-05	51	5	6.93	7.66	5.7	14	NA	NA
	SW02	26	31-Oct-05	20	5	7.07	7.73	6.1	16	NA	NA

- Notes:
- \* Aerators located downstream of pump station (See [Figure 1](#)).
  - \*\* Aerators located upstream of sample site (See [Figure 1](#)).
  - NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 05).
  - Yellow Shading = Non-detect, i.e., U-flagged data, and red shading = result exceeds benchmark.

Table 4: Water Quality Analysis Results  
Pumping Station #12

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #12 (Pump Outflow)	SW03	1	6-Oct-05	20	5	NA	7.34	7.3	20	off	NA
	SW03	2	7-Oct-05	43	5	7.04	7.23	8.5	19	off	NA
	SW03	3	8-Oct-05	25	5	4.92	7.14	7	99	off	NA
	SW03	4	9-Oct-05	57	5	5.94	7.38	6.7	37	off	NA
	SW03	5	10-Oct-05	26	5	5.06	6.58	7.2	27	off	NA
	SW03	6	11-Oct-05	20	5	4.31	7.38	7.7	21	off	NA
	SW03	7	12-Oct-05	240	5	5.16	7.37	7.5	82	off	NA
	SW03	8	13-Oct-05	39	5	5.07	7.73	6.7	22	off	NA
	SW03	9	14-Oct-05	48	5	5.83	7.29	7.2	200	off	NA
	SW03	10	15-Oct-05	48	5	5.08	7.50	6.9	28	off	NA
	SW03	11	16-Oct-05	32	25	5.52	7.48	5.9	260	off	NA
	SW03	12	17-Oct-05	20	5	4.45	7.27	5.8	11	off	NA
	SW03	13	18-Oct-05	28	5	4.49	7.15	6.3	18	off	NA
	SW03	14	19-Oct-05	32	10	4.76	8.47	5.6	530	off	NA
	SW03	15	20-Oct-05	50	5	6.55	7.17	6.1	110	off	NA
	SW03	16	21-Oct-05	63	5	6.51	7.31	4.7	28	off	NA
	SW03	17	22-Oct-05	28	5	6.76	7.49	3.6	23	off	NA
	SW03	18	23-Oct-05	55	5	6.32	7.58	3.8	17	off	NA
	SW03	19	24-Oct-05	20	5	6.32	7.50	4.1	18	off	NA
	SW03	20	25-Oct-05	35	5	6.60	7.30	4.4	16	off	NA
	SW03	21	26-Oct-05	160	11	6.96	7.11	9.7	410	off	NA
	SW03	22	27-Oct-05	96	5.9	6.04	7.42	5.2	18	off	NA
	SW03	23	28-Oct-05	75	5.3	6.50	7.28	5.9	36	off	NA
	SW03	24	29-Oct-05	20	5	6.58	7.40	5.7	10	off	NA
	SW03	25	30-Oct-05	59	5	6.34	7.43	5.3	17	off	NA
	SW03	26	31-Oct-05	37	5	6.82	7.55	6.3	16	off	NA
P/S #12 (Canal Outfall)	SW04	1	6-Oct-05	20	5	NA	7.66	6.8	25	NA	NA
	SW04	2	7-Oct-05	210	5	6.70	7.53	7	71	NA	NA
	SW04	3	8-Oct-05	25	5	4.70	7.56	8.2	100	NA	NA
	SW04	4	9-Oct-05	41	5	4.96	7.46	6.4	61	NA	NA
	SW04	5	10-Oct-05	20	5	5.06	7.58	9.6	46	NA	NA
	SW04	6	11-Oct-05	23	5	3.54	7.25	7.1	54	NA	NA
	SW04	7	12-Oct-05	200	5	3.94	6.75	7	800	NA	NA
	SW04	8	13-Oct-05	39	5	4.72	7.77	7	48	NA	NA
	SW04	9	14-Oct-05	48	5	3.84	7.74	7.6	54	NA	NA
	SW04	10	15-Oct-05	39	5	4.61	8.08	10	53	NA	NA
	SW04	11	16-Oct-05	39	5	5.52	7.60	6.3	29	NA	NA
	SW04	12	17-Oct-05	20	5	4.82	7.66	6.2	26	NA	NA
	SW04	13	18-Oct-05	28	5	5.07	7.74	6	17	NA	NA
	SW04	14	19-Oct-05	40	5	5.03	7.31	6	14	NA	NA
	SW04	15	20-Oct-05	58	5	6.46	7.50	7.6	120	NA	NA
	SW04	16	21-Oct-05	41	5	5.23	7.51	3.9	78	NA	NA
	SW04	17	22-Oct-05	44	5	6.19	7.81	4.3	120	NA	NA
	SW04	18	23-Oct-05	55	5	5.36	7.81	3.5	61	NA	NA
	SW04	19	24-Oct-05	67	5	5.28	7.64	4.5	72	NA	NA
	SW04	20	25-Oct-05	50	5	5.70	7.54	4.7	20	NA	NA
	SW04	21	26-Oct-05	32	5	8.24	7.85	4.9	73	NA	NA
	SW04	22	27-Oct-05	40	5	6.47	7.71	5.1	38	NA	NA
	SW04	23	28-Oct-05	91	5	6.89	7.61	5.2	79	NA	NA
	SW04	24	29-Oct-05	44	5	6.95	5.25	5.2	31	NA	NA
	SW04	25	30-Oct-05	59	5	6.74	7.66	5	13	NA	NA
	SW04	26	31-Oct-05	65	5	7.02	7.64	7.4	19	NA	NA

- Notes:
1. NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 05); and NA “Field pH” = meter not functioning.
  2. Yellow Shading = Non-detect, i.e., U-flagged data, and red shading = result exceeds benchmark.



Table 5: Water Quality Analysis Results  
Orleans Canal

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #7 (Pump Outflow)	SW01	1	6-Oct-05	20	5	6.25	7.17	9	15	off	3*
	SW01	2	7-Oct-05	20	5	7.55	7.04	10	21	on	3*
	SW01	3	8-Oct-05	25	5	5.96	7.37	7.8	10	off	3*
	SW01	4	9-Oct-05	41	5	6.75	7.48	8.3	14	off	3*
	SW01	5	10-Oct-05	26	5	6.20	7.56	9.7	12	off	3*
	SW01	6	11-Oct-05	20	5	5.90	7.60	9.5	26	off	3*
	SW01	7	12-Oct-05	36	5	6.48	7.80	20	43	off	3*
	SW01	8	13-Oct-05	39	5	6.05	8.14	10	8	off	3*
	SW01	9	14-Oct-05	30	5	6.57	8.52	10	22	off	3*
	SW01	10	15-Oct-05	30	5	5.74	7.94	10	30	off	3*
	SW01	11	16-Oct-05	47	5	6.48	7.91	11	62	off	3*
	SW01	12	17-Oct-05	36	5	6.06	7.28	11	24	off	3*
	SW01	13	18-Oct-05	44	5	5.25	7.86	11	20	off	3*
	SW01	14	19-Oct-05	40	5	6.41	8.20	11	24	off	3*
	SW01	15	20-Oct-05	35	5	7.38	7.59	11	21	off	3*
	SW01	16	21-Oct-05	56	5	7.41	7.55	8.9	21	off	3*
	SW01	17	22-Oct-05	44	5	7.47	7.90	7.9	20	off	3*
	SW01	18	23-Oct-05	33	5	7.71	7.96	9.5	21	off	3*
	SW01	19	24-Oct-05	44	5	7.82	8.01	8.2	24	off	3*
	SW01	20	25-Oct-05	20	5	7.71	7.88	8.3	24	off	2*
	SW01	21	26-Oct-05	39	5	8.21	7.95	8.5	21	off	2*
	SW01	22	27-Oct-05	40	5	7.25	7.81	8.6	22	off	2*
	SW01	23	28-Oct-05	91	5	7.32	7.84	9.4	18	off	NA
	SW01	24	29-Oct-05	62	5	7.29	7.79	11	19	off	NA
	SW01	25	30-Oct-05	59	5	7.08	7.76	9.8	11	off	NA
	SW01	26	31-Oct-05	28	5	7.05	7.44	9.2	69	off	NA
Orleans (Canal Outfall)	SW05	1	6-Oct-05	20	11	6.50	7.47	14	29	NA	3**
	SW05	2	7-Oct-05	20	5	7.09	7.60	7.7	95	NA	3**
	SW05	3	8-Oct-05	25	5	5.26	7.71	6.1	100	NA	3**
	SW05	4	9-Oct-05	49	5	6.15	7.77	5	43	NA	3**
	SW05	5	10-Oct-05	26	5	5.98	7.53	7.3	36	NA	3**
	SW05	6	11-Oct-05	23	5	5.13	7.36	6.4	26	NA	3**
	SW05	7	12-Oct-05	27	5	5.65	7.70	5.9	59	NA	3**
	SW05	8	13-Oct-05	30	5	5.42	7.86	7.1	38	NA	3**
	SW05	9	14-Oct-05	120	5	5.98	7.49	6.6	43	NA	3**
	SW05	10	15-Oct-05	30	5	5.05	7.95	6.9	28	NA	3**
	SW05	11	16-Oct-05	55	5	5.30	7.76	5.9	62	NA	3**
	SW05	12	17-Oct-05	20	5	5.65	7.56	5.5	27	NA	3**
	SW05	13	18-Oct-05	36	5	4.86	7.86	5.8	24	NA	3**
	SW05	14	19-Oct-05	32	5	5.82	7.73	5.6	23	NA	3**
	SW05	15	20-Oct-05	50	5	7.29	7.54	6.5	22	NA	3**
	SW05	16	21-Oct-05	86	5	7.22	7.61	4.5	32	NA	3**
	SW05	17	22-Oct-05	52	5	4.74	7.92	4.7	59	NA	3**
	SW05	18	23-Oct-05	40	5	7.46	7.86	3.6	27	NA	3**
	SW05	19	24-Oct-05	22	5	7.29	7.83	4.6	210	NA	3**
	SW05	20	25-Oct-05	20	5	7.23	7.64	4.2	66	NA	3**
	SW05	21	26-Oct-05	39	5	7.83	7.80	5	33	NA	3**
	SW05	22	27-Oct-05	20	5	6.85	7.58	4.1	39	NA	3**
	SW05	23	28-Oct-05	83	5	7.14	7.72	5.3	33	NA	NA
	SW05	24	29-Oct-05	36	5	7.13	7.77	5.1	18	NA	NA
	SW05	25	30-Oct-05	67	5	7.30	8.14	7.2	19	NA	NA
	SW05	26	31-Oct-05	20	5	7.22	7.93	6.6	37	NA	NA

- Notes:
- \* Aerators located downstream of pumping station (See [Figure 1](#)).
  - \*\* Aerators located upstream of sample site (See [Figure 1](#)).
  - NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep – 27 Oct 05).
  - Yellow shading = Non-detect, i.e. U-flagged data, and red shading = result exceeds benchmark.



Table 6: Water Quality Analysis Results  
London Canal

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #3 (Pump Outflow)	SW07	1	6-Oct-05	20	5	6.60	8.26	8.2	59	off	3*
	SW07	2	7-Oct-05	34	5	7.58	7.98	8.5	19	off	3*
	SW07	3	8-Oct-05	25	5	5.59	7.95	8.5	16	off	3*
	SW07	4	9-Oct-05	110	5	6.74	7.99	7.8	19	off	3*
	SW07	5	10-Oct-05	26	5	6.32	8.01	10	15	off	3*
	SW07	6	11-Oct-05	20	5	6.00	8.05	8.3	21	off	3*
	SW07	7	12-Oct-05	27	5	5.38	8.12	7.4	24	off	3*
	SW07	8	13-Oct-05	130	5	5.92	8.34	8.2	16	off	3*
	SW07	9	14-Oct-05	48	5	5.74	8.26	8.7	20	off	3*
	SW07	10	15-Oct-05	110	5	5.26	8.21	8.2	84	off	3*
	SW07	11	16-Oct-05	47	5	5.83	8.14	9.1	22	off	3*
	SW07	12	17-Oct-05	20	5	6.00	8.28	9.7	17	off	3*
	SW07	13	18-Oct-05	36	5	6.04	8.14	9.4	22	off	3*
	SW07	14	19-Oct-05	24	5	6.21	8.41	9.7	38	off	3*
	SW07	15	20-Oct-05	50	5	6.54	6.94	11	43	off	3*
	SW07	16	21-Oct-05	41	5	7.13	7.43	9.1	15	off	3*
	SW07	17	22-Oct-05	28	5	5.58	7.52	7.6	10	off	3*
	SW07	18	23-Oct-05	55	5	7.69	7.90	7.7	13	off	3*
	SW07	19	24-Oct-05	59	5	7.86	8.05	7.6	10	off	3*
	SW07	20	25-Oct-05	27	5	7.88	8.12	8	18	off	2*
	SW07	21	26-Oct-05	20	5	8.45	8.32	8.1	23	off	2*
	SW07	22	27-Oct-05	20	5	7.66	8.32	8.3	14	off	2*
	SW07	23	28-Oct-05	83	5	7.92	8.39	8.8	14	off	NA
	SW07	24	29-Oct-05	89	5	7.85	8.41	8.7	4	off	NA
	SW07	25	30-Oct-05	67	5	5.04	8.17	8.5	8	off	NA
	SW07	26	31-Oct-05	20	5	7.25	7.54	10	16	off	NA
P/S #4 (Pump Outflow)	SW08	1	6-Oct-05	20	5	6.44	7.30	9.5	19	off	NA
	SW08	2	7-Oct-05	34	5	7.55	7.06	9.3	23	off	NA
	SW08	3	8-Oct-05	25	5	5.57	7.34	11	17	on	NA
	SW08	4	9-Oct-05	24	5	6.15	7.38	6.8	18	off	NA
	SW08	5	10-Oct-05	20	5	6.08	7.41	10	18	off	NA
	SW08	6	11-Oct-05	20	5	5.48	7.49	7.6	19	off	NA
	SW08	7	12-Oct-05	27	5	5.76	7.57	8.6	18	off	NA
	SW08	8	13-Oct-05	30	5	5.83	7.97	8.3	6	off	NA
	SW08	9	14-Oct-05	56	5	6.21	7.77	8.3	14	off	NA
	SW08	10	15-Oct-05	30	5	5.26	7.64	7.8	31	off	NA
	SW08	11	16-Oct-05	32	5	6.04	7.72	9	16	off	NA
	SW08	12	17-Oct-05	36	5	5.85	7.60	8.7	18	off	NA
	SW08	13	18-Oct-05	28	5	5.34	7.71	9	11	off	NA
	SW08	14	19-Oct-05	48	5	6.06	7.80	9.5	20	off	NA
	SW08	15	20-Oct-05	35	5	6.96	7.14	9	31	off	NA
	SW08	16	21-Oct-05	41	5	6.87	7.31	7.7	16	off	NA
	SW08	17	22-Oct-05	36	5	6.80	7.67	6.5	13	off	NA
	SW08	18	23-Oct-05	48	5	7.49	7.72	6.7	17	off	NA
	SW08	19	24-Oct-05	30	5	7.40	7.68	6.7	16	off	NA
	SW08	20	25-Oct-05	20	5	7.50	7.77	6.2	21	off	NA
	SW08	21	26-Oct-05	32	5	7.71	7.55	6.6	14	off	NA
	SW08	22	27-Oct-05	40	5	7.03	7.63	6.4	15	off	NA
	SW08	23	28-Oct-05	75	5	7.23	7.81	7.3	18	off	NA
	SW08	24	29-Oct-05	80	5	7.40	8.02	7.7	14	off	NA
	SW08	25	30-Oct-05	59	5	7.34	8.38	7.7	17	off	NA
	SW08	26	31-Oct-05	20	5	7.94	8.42	10	15	off	NA

(Continued on next page)

Table 6 Continued: Water Quality Analysis Results  
London Canal

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
London (Canal Outfall)	SW09	1	6-Oct-05	21	5	6.76	7.96	6.7	25	NA	3**
	SW09	2	7-Oct-05	34	5	7.39	7.78	7	80	NA	3**
	SW09	3	8-Oct-05	20	5	5.35	7.67	7.3	52	NA	3**
	SW09	4	9-Oct-05	65	5	6.18	7.83	5.2	48	NA	3**
	SW09	5	10-Oct-05	200	5	5.96	7.75	6.3	31	NA	3**
	SW09	6	11-Oct-05	23	5	4.33	7.75	6.4	36	NA	3**
	SW09	7	12-Oct-05	20	5	5.33	7.74	6.5	170	NA	3**
	SW09	8	13-Oct-05	39	5	5.68	7.72	6.5	20	NA	3**
	SW09	9	14-Oct-05	65	5	6.08	7.64	6.1	28	NA	3**
	SW09	10	15-Oct-05	48	5	5.72	7.82	5.7	27	NA	3**
	SW09	11	16-Oct-05	39	5	5.46	7.79	5.4	29	NA	3**
	SW09	12	17-Oct-05	28	5	4.81	7.62	5.5	28	NA	3**
	SW09	13	18-Oct-05	20	5	5.45	7.82	6	26	NA	3**
	SW09	14	19-Oct-05	96	5	5.52	7.76	5.4	23	NA	3**
	SW09	15	20-Oct-05	20	5	7.04	7.25	7.1	74	NA	3**
	SW09	16	21-Oct-05	63	5	7.49	7.90	4.5	280	NA	3**
	SW09	17	22-Oct-05	28	5	5.50	7.76	4.3	29	NA	3**
	SW09	18	23-Oct-05	33	5	7.62	7.94	3.4	26	NA	3**
	SW09	19	24-Oct-05	20	5	7.49	7.84	4.7	37	NA	3**
	SW09	20	25-Oct-05	20	5	7.37	7.73	4.9	43	NA	3**
	SW09	21	26-Oct-05	55	5	7.96	7.75	4.4	21	NA	3**
	SW09	22	27-Oct-05	40	5	7.05	7.70	4.5	20	NA	3**
	SW09	23	28-Oct-05	75	5	7.05	7.79	5.2	23	NA	NA
	SW09	24	29-Oct-05	62	5	7.26	7.83	5.2	18	NA	NA
	SW09	25	30-Oct-05	51	5	6.05	7.93	5.5	22	NA	NA
	SW09	26	31-Oct-05	28	5	7.41	8.00	6.7	29	NA	NA

- Notes:
1. Aerators located downstream of pumping station (See [Figure 1](#)).
  2. \*\* Aerators located upstream of sample site (See [Figure 1](#)).
  3. NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 05).
  4. Yellow shading = Non-detect, i.e., U-flagged data, and red shading = result exceeds benchmark.

Table 7: Water Quality Analysis Results  
Inner Harbor Navigation Canal

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #19 (Pump Outflow)	SW11	1	6-Oct-05	20	5	6.71	7.44	9.7	18	off	NA
	SW11	2	7-Oct-05	26	5	8.09	7.55	8.7	26	off	NA
	SW11	3	8-Oct-05	25	5	7.57	7.45	7.4	28	off	NA
	SW11	4	9-Oct-05	150	5	7.39	7.48	6.7	28	off	NA
	SW11	5	10-Oct-05	120	5	7.57	7.53	8	27	off	NA
	SW11	6	11-Oct-05	33	5	7.37	7.20	6.8	28	on	NA
	SW11	7	12-Oct-05	36	5	7.60	7.44	10	18	off	NA
	SW11	8	13-Oct-05	48	5	7.66	7.78	6.3	12	off	NA
	SW11	9	14-Oct-05	48	5	7.56	7.30	6.6	20	off	NA
	SW11	10	15-Oct-05	48	5	7.48	7.78	17	22	off	NA
	SW11	11	16-Oct-05	24	5	7.28	7.39	6.9	26	off	NA
	SW11	12	17-Oct-05	75	6.5	7.37	7.38	6.7	24	off	NA
	SW11	13	18-Oct-05	20	5	4.89	7.05	8.4	21	off	NA
	SW11	14	19-Oct-05	80	5	7.60	7.48	5.8	20	on	NA
	SW11	15	20-Oct-05	20	5	7.40	7.55	7.2	26	off	NA
	SW11	16	21-Oct-05	56	5	7.40	7.56	3.8	26	off	NA
	SW11	17	22-Oct-05	52	5	7.80	7.91	3	22	off	NA
	SW11	18	23-Oct-05	84	5	7.70	8.04	2.7	23	off	NA
	SW11	19	24-Oct-05	67	5	7.50	7.46	1	19	off	NA
	SW11	20	25-Oct-05	20	5	6.90	7.79	5.6	21	on	NA
	SW11	21	26-Oct-05	47	5	7.50	7.43	4	13	off	NA
	SW11	22	27-Oct-05	40	5	7.50	7.52	5.9	35	off	NA
	SW11	23	28-Oct-05	66	5	7.12	7.47	6	18	off	NA
	SW11	24	29-Oct-05	44	5	7.12	7.52	6.3	19	off	NA
	SW11	25	30-Oct-05	59	5	7.46	7.49	7.7	19	off	NA
	SW11	26	31-Oct-05	37	5	7.40	7.60	10	21	off	NA
IHNC (Canal "Outfall")	SW10	1	6-Oct-05	21	5	7.10	7.93	7.5	24	NA	NA
	SW10	2	7-Oct-05	20	5	7.88	7.74	7	44	NA	NA
	SW10	3	8-Oct-05	20	5	5.12	7.51	6.3	26	NA	NA
	SW10	4	9-Oct-05	81	5	4.96	7.45	5	41	NA	NA
	SW10	5	10-Oct-05	35	5	5.49	7.47	6.8	37	NA	NA
	SW10	6	11-Oct-05	33	5	4.75	7.52	7	30	NA	NA
	SW10	7	12-Oct-05	36	5	6.19	7.65	6.8	25	NA	NA
	SW10	8	13-Oct-05	48	5	5.24	6.64	8.1	16	NA	NA
	SW10	9	14-Oct-05	39	5	5.52	7.71	7.1	19	NA	NA
	SW10	10	15-Oct-05	48	5	5.12	7.87	6.8	21	NA	NA
	SW10	11	16-Oct-05	32	5	5.78	7.73	5.6	22	NA	NA
	SW10	12	17-Oct-05	83	5	4.97	7.60	5.8	24	NA	NA
	SW10	13	18-Oct-05	44	5	5.88	7.88	6	18	NA	NA
	SW10	14	19-Oct-05	48	5	5.22	8.13	5.7	23	NA	NA
	SW10	15	20-Oct-05	20	5	6.70	7.90	5.7	26	NA	NA
	SW10	16	21-Oct-05	63	5	7.00	7.54	3.7	38	NA	NA
	SW10	17	22-Oct-05	60	5	7.00	7.59	3	27	NA	NA
	SW10	18	23-Oct-05	70	5	7.20	7.62	3.1	59	NA	NA
	SW10	19	24-Oct-05	37	5	6.80	7.95	4.8	110	NA	NA
	SW10	20	25-Oct-05	20	5	6.60	7.80	4.3	39	NA	NA
	SW10	21	26-Oct-05	20	5	7.50	7.58	4.3	35	NA	NA
	SW10	22	27-Oct-05	24	5	7.30	7.64	4.9	41	NA	NA
	SW10	23	28-Oct-05	75	5	7.40	7.65	5.8	28	NA	NA
	SW10	24	29-Oct-05	44	5	7.40	7.70	6.2	24	NA	NA
	SW10	25	30-Oct-05	84	5	6.31	7.91	5.2	22	NA	NA
	SW10	26	31-Oct-05	83	5	7.60	7.70	5.8	24	NA	NA

- Note:
1. NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 02).
  2. Yellow shading = Non-detect, i.e., U-flagged data, and red shading = result exceeds benchmark.

Table 8: Water Quality Analysis Results  
Pumping Station #16 (St. Charles)

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #16 (Upstream)	SW12	1	6-Oct-05	29	5	7.11	7.87	19	33	NA	NA
	SW12	2	7-Oct-05	51	5	7.92	7.57	18	20	NA	NA
	SW12	3	8-Oct-05	41	5	7.32	7.86	13	30	NA	NA
	SW12	4	9-Oct-05	81	5	7.08	7.58	14	26	NA	NA
	SW12	5	10-Oct-05	310	5	7.49	7.97	16	30	NA	NA
	SW12	6	11-Oct-05	61	5	7.29	7.64	16	17	NA	NA
	SW12	7	12-Oct-05	100	5	7.91	8.18	18	25	NA	NA
	SW12	8	13-Oct-05	48	5	7.34	8.01	17	16	NA	NA
	SW12	9	14-Oct-05	120	5	7.62	7.86	17	25	NA	NA
	SW12	10	15-Oct-05	120	5	7.49	7.88	19	18	NA	NA
	SW12	11	16-Oct-05	79	5	7.41	7.97	16	16	NA	NA
	SW12	12	17-Oct-05	120	5	7.37	7.63	16	16	NA	NA
	SW12	13	18-Oct-05	60	5	7.29	7.73	16	17	NA	NA
	SW12	14	19-Oct-05	80	5	7.60	7.73	17	21	NA	NA
	SW12	15	20-Oct-05	65	5	7.50	7.68	17	23	NA	NA
	SW12	16	21-Oct-05	41	5	7.40	7.65	12	13	NA	NA
	SW12	17	22-Oct-05	28	5	7.60	7.85	13	28	NA	NA
	SW12	18	23-Oct-05	40	5	7.40	7.83	12	15	NA	NA
	SW12	19	24-Oct-05	20	5	7.50	7.83	9.9	17	NA	NA
	SW12	20	25-Oct-05	27	5	7.60	7.76	8.5	13	NA	NA
	SW12	21	26-Oct-05	39	5	8.00	8.14	8.7	16	NA	NA
	SW12	22	27-Oct-05	20	5	7.40	7.72	9.4	13	NA	NA
	SW12	23	28-Oct-05	66	5	7.60	7.76	8	10	NA	NA
	SW12	24	29-Oct-05	44	5	7.60	7.73	8.3	16	NA	NA
	SW12	25	30-Oct-05	42	5	7.70	7.65	7.3	15	NA	NA
	SW12	26	31-Oct-05	20	5	7.60	7.69	9.2	9	NA	NA
P/S #16 (Canal Outfall)	SW13	1	6-Oct-05	21	5	7.80	8.18	12	65	off	3**
	SW13	2	7-Oct-05	77	5	7.94	7.73	12	100	off	3**
	SW13	3	8-Oct-05	25	5	5.79	7.86	9	130	off	3**
	SW13	4	9-Oct-05	81	5	6.22	7.69	7.7	110	off	3**
	SW13	5	10-Oct-05	44	5	6.26	7.80	11	75	off	3**
	SW13	6	11-Oct-05	33	5	5.47	7.70	9.7	70	off	3**
	SW13	7	12-Oct-05	20	5	6.26	7.31	9.4	77	off	3**
	SW13	8	13-Oct-05	48	5	5.66	7.47	8.8	82	off	3**
	SW13	9	14-Oct-05	120	5	6.68	7.82	11	76	off	3**
	SW13	10	15-Oct-05	39	5	5.62	7.97	7.2	67	off	3**
	SW13	11	16-Oct-05	55	5	6.26	7.85	8.3	58	off	3**
	SW13	12	17-Oct-05	20	5	6.02	7.91	7.6	58	off	3**
	SW13	13	18-Oct-05	44	5	6.16	7.88	6.8	43	off	3**
	SW13	14	19-Oct-05	56	5	5.81	7.87	6.5	49	off	3**
	SW13	15	20-Oct-05	50	5	7.20	7.77	7.2	46	off	3**
	SW13	16	21-Oct-05	63	5	7.40	7.62	4.7	45	off	3**
	SW13	17	22-Oct-05	52	5	7.70	7.71	3.7	68	off	3**
	SW13	18	23-Oct-05	77	5	7.10	7.75	3.7	50	off	3**
	SW13	19	24-Oct-05	30	5	7.60	7.54	4.2	72	off	3**
	SW13	20	25-Oct-05	20	5	7.50	7.76	6.5	100	off	3**
	SW13	21	26-Oct-05	24	5	7.70	8.71	4.4	51	off	3**
	SW13	22	27-Oct-05	48	5	7.90	8.06	7	55	off	3**
	SW13	23	28-Oct-05	83	5	7.80	7.97	8.6	69	off	NA
	SW13	24	29-Oct-05	44	5	7.80	8.04	6.9	26	off	NA
	SW13	25	30-Oct-05	59	5	6.59	7.97	7.7	28	off	NA
	SW13	26	31-Oct-05	55	5	7.70	7.87	6.5	25	off	NA

- Notes:
1. \*\* Aerators located upstream of sample site (See [Figure 1](#)).
  2. NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 05).

Table 9: Water Quality Analysis Results  
Pumping Station #10 (Citrus)

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #10 (Upstream)	SW14	1	6-Oct-05	120	5	7.53	7.86	21	71	NA	3*
	SW14	2	7-Oct-05	60	5	7.94	8.05	24	39	NA	3*
	SW14	3	8-Oct-05	66	5	7.14	8.02	19	33	NA	3*
	SW14	4	9-Oct-05	140	5	6.76	7.41	38	35	NA	3*
	SW14	5	10-Oct-05	61	5	7.17	7.76	31	40	NA	3*
	SW14	6	11-Oct-05	100	5	6.90	7.43	38	30	NA	3*
	SW14	7	12-Oct-05	100	5	7.36	7.65	37	35	NA	3*
	SW14	8	13-Oct-05	110	5	7.22	7.94	30	40	NA	3*
	SW14	9	14-Oct-05	48	5	7.43	7.83	27	28	NA	3*
	SW14	10	15-Oct-05	48	5	7.27	7.67	31	20	NA	3*
	SW14	11	16-Oct-05	79	5	7.37	8.01	20	17	NA	3*
	SW14	12	17-Oct-05	44	5	7.60	8.05	21	16	NA	3*
	SW14	13	18-Oct-05	36	5	7.37	7.70	22	31	NA	3*
	SW14	14	19-Oct-05	64	5	7.59	7.75	19	18	NA	3*
	SW14	15	20-Oct-05	73	5	7.40	7.61	19	20	NA	3*
	SW14	16	21-Oct-05	48	5	7.30	7.58	13	18	NA	3*
	SW14	17	22-Oct-05	44	5	7.50	7.69	15	15	NA	3*
	SW14	18	23-Oct-05	77	5	7.46	7.69	12	14	NA	3*
	SW14	19	24-Oct-05	89	5	7.80	8.02	16	200	NA	3*
	SW14	20	25-Oct-05	42	5	7.60	7.90	11	18	NA	3*
	SW14	21	26-Oct-05	24	5	7.80	7.98	11	28	NA	3*
	SW14	22	27-Oct-05	32	5	7.60	7.81	9.9	14	NA	3*
	SW14	23	28-Oct-05	120	5	7.60	7.82	13	19	NA	NA
	SW14	24	29-Oct-05	44	5	7.60	7.81	9.2	8	NA	NA
	SW14	25	30-Oct-05	59	5	7.85	7.88	8	11	NA	NA
	SW14	26	31-Oct-05	28	5	7.80	7.79	8.3	13	NA	NA
P/S #10 (Pump Outflow to Lake)	SW15	1	6-Oct-05	37	5	7.80	8.14	8.8	120	off	3**
	SW15	2	7-Oct-05	20	5	7.98	8.09	10	140	off	3**
	SW15	3	8-Oct-05	33	5	6.00	7.90	9.1	99	off	3**
	SW15	4	9-Oct-05	73	5	6.07	7.83	8.7	94	off	3**
	SW15	5	10-Oct-05	44	5	6.40	7.74	8.8	64	off	3**
	SW15	6	11-Oct-05	61	5	6.30	7.52	17	69	off	3**
	SW15	7	12-Oct-05	45	5	6.64	7.59	12	77	off	3**
	SW15	8	13-Oct-05	48	5	6.11	7.75	9.8	28	off	3**
	SW15	9	14-Oct-05	39	5	6.76	7.74	9	36	off	3**
	SW15	10	15-Oct-05	56	5	5.62	7.92	8.2	36	off	3**
	SW15	11	16-Oct-05	63	5	6.54	7.90	6.3	36	off	3**
	SW15	12	17-Oct-05	20	5	6.16	7.96	6.4	33	off	3**
	SW15	13	18-Oct-05	36	5	6.79	7.64	16	38	off	3**
	SW15	14	19-Oct-05	24	5	6.14	7.23	6.7	27	off	3**
	SW15	15	20-Oct-05	42	5	7.30	7.62	6.9	19	off	3**
	SW15	16	21-Oct-05	100	5	7.50	7.70	17	32	off	3**
	SW15	17	22-Oct-05	28	5	7.60	7.76	3.7	40	off	3**
	SW15	18	23-Oct-05	48	5	7.58	7.85	3	42	off	3**
	SW15	19	24-Oct-05	44	5	7.60	7.88	14	25	on	3**
	SW15	20	25-Oct-05	65	5	7.80	8.03	12	38	off	3**
	SW15	21	26-Oct-05	39	5	7.70	7.88	4.9	31	off	3**
	SW15	22	27-Oct-05	32	5	7.80	7.92	6.4	39	off	3**
	SW15	23	28-Oct-05	99	5	7.90	7.99	11	62	off	NA
	SW15	24	29-Oct-05	80	5	7.90	7.94	6.7	25	off	NA
	SW15	25	30-Oct-05	100	5	7.68	8.00	5.6	25	off	NA
	SW15	26	31-Oct-05	37	5	7.70	7.69	6	28	off	NA

- Notes:
- 1. \* Aerators located upstream (1) and downstream (2) of sample site (See [Figure 1](#)).
  - 2. \*\* Aerators located upstream (2) of sample site (See [Figure 1](#)).
  - 3. NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 05).

Table 10: Water Quality Analysis Results  
Pumping Station #14 (Jahncke)

Pumping Station ID	Sample No.	Day #	Sample Date	COD (mg/L)	HEM (mg/L)	Field pH (s.u.)	Lab pH (s.u.)	TOC (mg/L)	TSS (mg/L)	Pump Status	# Aerators Deployed @ Time of Sampling
P/S #14 (Upstream)	SW16	1	6-Oct-05	94	5	7.60	7.45	41	43	NA	3*
	SW16	2	7-Oct-05	120	5	7.70	7.24	41	25	NA	3*
	SW16	3	8-Oct-05	120	5	6.61	7.39	41	20	NA	3*
	SW16	4	9-Oct-05	150	5	6.43	7.77	32	34	NA	3*
	SW16	5	10-Oct-05	44	5	6.70	7.64	36	43	NA	3*
	SW16	6	11-Oct-05	150	5	6.69	7.65	36	34	NA	3*
	SW16	7	12-Oct-05	73	5	7.30	7.65	39	27	NA	3*
	SW16	8	13-Oct-05	120	5	6.45	7.90	30	23	NA	3*
	SW16	9	14-Oct-05	56	5	7.46	7.71	33	34	NA	3*
	SW16	10	15-Oct-05	110	5	6.75	7.78	34	30	NA	3*
	SW16	11	16-Oct-05	120	5	7.11	7.94	32	28	NA	3*
	SW16	12	17-Oct-05	99	5	6.52	8.00	28	31	NA	3*
	SW16	13	18-Oct-05	150	5	7.20	7.43	40	36	NA	3*
	SW16	14	19-Oct-05	88	5	7.21	7.78	30	24	NA	3*
	SW16	15	20-Oct-05	88	5	7.50	7.74	23	23	NA	3*
	SW16	16	21-Oct-05	93	5	7.70	7.59	22	26	NA	3*
	SW16	17	22-Oct-05	110	5	7.60	7.77	24	27	NA	3*
	SW16	18	23-Oct-05	110	5	7.57	8.12	22	20	NA	3*
	SW16	19	24-Oct-05	81	5	7.90	8.08	23	28	NA	3*
	SW16	20	25-Oct-05	88	5	7.80	8.05	28	26	NA	3*
	SW16	21	26-Oct-05	47	5	7.90	8.11	19	22	NA	3*
	SW16	22	27-Oct-05	40	5	7.90	8.09	18	28	NA	3*
	SW16	23	28-Oct-05	160	5	7.80	7.88	31	29	NA	NA
	SW16	24	29-Oct-05	98	5	7.80	8.08	17	25	NA	NA
	SW16	25	30-Oct-05	84	5	7.76	8.07	12	29	NA	NA
	SW16	26	31-Oct-05	74	5	8.20	8.33	13	25	NA	NA
P/S #14 (Pump Outflow to Lake)	SW17	1	6-Oct-05	45	5	7.86	7.97	10	620	off	3**
	SW17	2	7-Oct-05	86	5	7.97	7.58	31	110	on	3**
	SW17	3	8-Oct-05	25	5	6.36	7.79	6.1	54	off	3**
	SW17	4	9-Oct-05	57	5	6.36	7.94	5.9	59	off	3**
	SW17	5	10-Oct-05	96	5	6.70	7.81	7.2	43	off	3**
	SW17	6	11-Oct-05	20	5	6.68	7.43	6.1	34	off	3**
	SW17	7	12-Oct-05	27	5	6.90	7.79	7.6	43	off	3**
	SW17	8	13-Oct-05	39	5	6.33	7.77	8.2	16	on	3**
	SW17	9	14-Oct-05	65	5	7.49	7.90	35	39	on	3**
	SW17	10	15-Oct-05	48	5	6.22	7.97	5.9	34	off	3**
	SW17	11	16-Oct-05	63	5	6.86	7.87	5.6	28	off	3**
	SW17	12	17-Oct-05	75	5	6.32	7.83	5.8	24	off	3**
	SW17	13	18-Oct-05	91	5	7.13	7.81	31	38	off	3**
	SW17	14	19-Oct-05	88	5	6.95	7.68	27	36	on	3**
	SW17	15	20-Oct-05	50	5	7.20	7.48	6.2	28	off	3**
	SW17	16	21-Oct-05	56	5	7.40	7.66	3.8	28	off	3**
	SW17	17	22-Oct-05	36	5	7.50	7.14	4	27	off	3**
	SW17	18	23-Oct-05	55	5	7.58	7.82	3	30	off	3**
	SW17	19	24-Oct-05	37	5	7.80	7.84	4.9	51	off	3**
	SW17	20	25-Oct-05	65	5	7.90	8.11	21	28	on	3**
	SW17	21	26-Oct-05	32	5	7.80	6.47	4.9	37	off	3**
	SW17	22	27-Oct-05	48	5	7.60	7.79	5.8	26	off	3**
	SW17	23	28-Oct-05	140	5	7.80	7.99	21	28	on	NA
	SW17	24	29-Oct-05	36	5	7.70	7.96	5.3	27	on	NA
	SW17	25	30-Oct-05	59	5	7.15	7.77	6	19	on	NA
	SW17	26	31-Oct-05	46	5	7.90	7.92	5.5	29	off	NA

- Notes:
- \* Aerators located downstream (3) of sample site (See [Figure 1](#)).
  - \*\* Aerators located upstream (3) of pump station/sample site (See [Figure 1](#)).
  - NA “Pump Status” = sample site with no pumps; NA “# Aerators Deployed @ Time of Sampling” = Not applicable (Note: aerators in place 17 Sep 05 – 27 Oct 05).

Table 11: Field Data

Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
P/S #7 (Pump Outflow)	1	SW01	30.00	-90.101102	6-Oct-05	15:15	84.4	29.1		3.53	0.2	8.2
	2	SW01	30.00	-90.101102	7-Oct-05	11:07	79.7	26.5		3.2	0.15	6.97
	3	SW01	29.995178	-90.101102	8-Oct-05	11:17	74.7	23.7		2.92	0.14	8.49
	4	SW01	30.994933	-90.100800	9-Oct-05	11:50	75.6	24.2		3.26	0.16	8.9
	5	SW01	30.994933	-90.100800	10-Oct-05	11:22	77.5	25.3	2.9	3.65	0.18	9.23
	6	SW01	30.994933	-90.100800	11-Oct-05	11:15	77.4	25.20	3.4	4.16	0.21	9.17
	7	SW01	30.994933	-90.100800	12-Oct-05	11:20	77.0	25.00	3.7	4.73	0.24	7.46
	8	SW01	30.994933	-90.100800	13-Oct-05	11:20	77.5	25.30	3.84	4.64	0.23	8.59
	9	SW01	30.994933	-90.100800	14-Oct-05	11:50	77.7	25.40	3.98	4.70	0.24	8.11
	10	SW01	30.994933	-90.100800	15-Oct-05	11:00	75.4	24.10	4.13	4.76	0.24	8.89
	11	SW01	30.994933	-90.100800	16-Oct-05	11:20	75.6	24.20	4.29	5.44	0.28	9.19
	12	SW01	30.994933	-90.100800	17-Oct-05	11:25	74.7	23.70	4.41	5.52	0.29	8.65
	13	SW01	30.994933	-90.100800	18-Oct-05	11:25	75.4	24.10	4.46	5.53	0.29	9.12
	14	SW01	30.994933	-90.100800	19-Oct-05	11:25	76.8	24.90	4.84	5.88	0.31	8.68
	15	SW01	30.994933	-90.100800	20-Oct-05	11:20	76.8	24.90	5.57	6.60	0.35	8.68
	16	SW01	30.994933	-90.100800	21-Oct-05	11:25	77.0	25.00	6.50	7.03	0.38	9.13
	17	SW01	30.994933	-90.100800	22-Oct-05	11:25	72.3	22.40	6.58	7.33	0.42	8.83
	18	SW01	30.994933	-90.100800	23-Oct-05	11:05	69.8	21.00	6.67	7.46	0.40	8.62
	19	SW01	30.994933	-90.100800	24-Oct-05	11:05	62.4	16.90	6.80	7.86	0.45	8.27
	20	SW01	30.994933	-90.100800	25-Oct-05	11:05	61.2	16.20	6.83	7.87	0.42	9.52
	21	SW01	30.994933	-90.100800	26-Oct-05	11:37	64.2	17.90	7.22	7.46	0.40	10.24
	22	SW01	30.994933	-90.100800	27-Oct-05	11:00	64.6	18.10	7.23	8.35	0.53	9.85
	23	SW01	30.994933	-90.100800	28-Oct-05	10:50	61.5	16.40	7.34	8.11	0.44	9.19
	24	SW01	30.994933	-90.100800	29-Oct-05	10:20	62.1	16.70	7.43	9.10	0.50	9.82
	25	SW01	30.994933	-90.100800	30-Oct-05	10:55	65.1	18.40	7.46	9.50	0.53	9.71
	26	SW01	30.994933	-90.100800	31-Oct-05	10:55	65.5	18.60	9.01	11.20	0.63	10.12
17th St (Canal Outfall)	1	SW02	30.02	-90.121685	6-Oct-05	13:00	83.8	28.8	9	14.1	0.8	6.86
	2	SW02	30.02	-90.121685	7-Oct-05	09:10	75.9	24.4		10.9	0.61	7.38
	3	SW02	30.023813	-90.121685	8-Oct-05	08:35	73.0	22.8		7.85	0.42	8.47
	4	SW02	30.023266	-90.121333	9-Oct-05	09:07	74.3	23.5		5.9	0.30	8.46
	5	SW02	30.023266	-90.121333	10-Oct-05	08:55	75.9	24.4	4.65	5.56	0.29	8.12
	6	SW02	30.023266	-90.121333	11-Oct-05	08:45	74.5	23.60	6.2	6.93	0.37	8.32
	7	SW02	30.023266	-90.121333	12-Oct-05	08:58	85.5	29.70	6.4	7.59	0.41	7.09
	8	SW02	30.023266	-90.121333	13-Oct-05	09:05	77.2	25.10	5.43	6.16	0.32	7.88
	9	SW02	30.023266	-90.121333	14-Oct-05	09:50	77.9	25.50	5.80	6.52	0.34	7.94
	10	SW02	30.023266	-90.121333	15-Oct-05	08:47	74.7	23.70	6.44	7.00	0.37	8.06
	11	SW02	30.023266	-90.121333	16-Oct-05	08:50	74.5	23.60	7.00	8.28	0.45	8.40
	12	SW02	30.023266	-90.121333	17-Oct-05	09:00	74.3	23.50	5.44	6.36	0.35	7.56
	13	SW02	30.023266	-90.121333	18-Oct-05	09:05	73.8	23.20	7.90	9.40	0.52	7.89
	14	SW02	30.023266	-90.121333	19-Oct-05	09:05	74.5	23.60	8.41	10.30	0.58	8.19
	15	SW02	30.023266	-90.121333	20-Oct-05	08:50	75.2	24.00	8.23	9.50	0.53	8.26
	16	SW02	30.023266	-90.121333	21-Oct-05	08:55	76.5	24.70	9.80	10.20	0.57	8.27
	17	SW02	30.023266	-90.121333	22-Oct-05	08:50	72.0	22.20	9.79	10.50	0.61	7.73
	18	SW02	30.023266	-90.121333	23-Oct-05	08:50	68.0	20.00	7.37	8.03	0.44	8.48
	19	SW02	30.023266	-90.121333	24-Oct-05	09:05	62.1	16.70	9.02	10.00	0.56	7.89
	20	SW02	30.023266	-90.121333	25-Oct-05	09:15	63.9	17.70	5.56	6.51	0.34	8.49
	21	SW02	30.023266	-90.121333	26-Oct-05	09:50	64.4	18.00	7.67	5.99	0.31	8.83
	22	SW02	30.023266	-90.121333	27-Oct-05	09:20	63.5	17.50	6.56	7.54	0.40	8.67
	23	SW02	30.023266	-90.121333	28-Oct-05	09:10	61.7	16.50	7.83	8.79	0.48	8.76
	24	SW02	30.023266	-90.121333	29-Oct-05	08:34	62.2	16.80	5.75	7.14	0.38	8.99
	25	SW02	30.023266	-90.121333	30-Oct-05	08:52	64.4	18.00	12.19	14.70	0.85	9.22
	26	SW02	30.023266	-90.121333	31-Oct-05	09:00	65.8	18.80	7.00	8.73	0.48	9.11

Table 11 Continued: Field Data

Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
P/S #12 (Pump Outflow)	1	SW03	30.02	-90.114068	6-Oct-05	13:15						
	2	SW03	30.02	-90.114068	7-Oct-05	08:48	77.0	25		13.6	0.78	7.42
	3	SW03	30.021776	-90.114068	8-Oct-05	08:15	76.1	24.5		12.3	0.69	7.87
	4	SW03	30.022033	-90.113883	9-Oct-05	08:31	72.9	22.7		10.8	0.60	8.67
	5	SW03	30.022033	-90.113883	10-Oct-05	08:36	73.9	23.3	8.5	9.7	0.54	8.28
	6	SW03	30.022033	-90.113883	11-Oct-05	08:25	74.8	23.80	8.8	9.70	0.54	8.26
	7	SW03	30.022033	-90.113883	12-Oct-05	08:35	74.7	23.70	8.9	10.50	0.59	7.44
	8	SW03	30.022033	-90.113883	13-Oct-05	08:50	75.4	24.10	8.80	9.60	0.53	8.01
	9	SW03	30.022033	-90.113883	14-Oct-05	09:24	76.3	24.60	9.01	9.90	0.55	7.98
	10	SW03	30.022033	-90.113883	15-Oct-05	08:25	73.8	23.20	9.23	9.80	0.54	8.10
	11	SW03	30.022033	-90.113883	16-Oct-05	08:25	74.3	23.50	9.38	11.10	0.62	8.74
	12	SW03	30.022033	-90.113883	17-Oct-05	08:35	73.4	23.00	9.52	11.10	0.63	7.65
	13	SW03	30.022033	-90.113883	18-Oct-05	08:47	73.8	23.20	9.61	10.90	0.61	7.89
	14	SW03	30.022033	-90.113883	19-Oct-05	08:47	74.5	23.60	10.04	11.40	0.65	8.21
	15	SW03	30.022033	-90.113883	20-Oct-05	08:31	75.2	24.00	10.69	12.00	0.69	8.10
	16	SW03	30.022033	-90.113883	21-Oct-05	08:35	75.9	24.40	11.09	11.50	0.65	8.45
	17	SW03	30.022033	-90.113883	22-Oct-05	08:35	73.0	22.80	11.24	11.90	0.68	6.63
	18	SW03	30.022033	-90.113883	23-Oct-05	08:35	69.1	20.60	11.99	11.80	0.67	7.88
	19	SW03	30.022033	-90.113883	24-Oct-05	08:50	65.7	18.70	11.47	12.30	0.71	7.22
	20	SW03	30.022033	-90.113883	25-Oct-05	08:55	66.2	19.00	11.49	12.50	0.71	7.63
	21	SW03	30.022033	-90.113883	26-Oct-05	09:35	65.8	18.80	11.89	12.60	0.72	8.62
	22	SW03	30.022033	-90.113883	27-Oct-05	08:55	65.3	18.50	11.99	13.10	0.75	8.10
	23	SW03	30.022033	-90.113883	28-Oct-05	08:55	63.9	17.70	11.96	13.00	0.74	8.05
	24	SW03	30.022033	-90.113883	29-Oct-05	08:19	63.3	17.40	11.87	13.80	0.80	8.57
	25	SW03	30.022033	-90.113883	30-Oct-05	08:35	59.5	15.30	11.35	14.40	0.82	8.79
	26	SW03	30.022033	-90.113883	31-Oct-05	08:45	65.1	18.40	11.99	14.40	0.83	9.04
P/S #12 (Canal Outfall)	1	SW04	30.03	-90.113269	6-Oct-05	13:50						
	2	SW04	30.03	-90.113269	7-Oct-05	08:22	76.6	24.8		13.4	0.77	7.35
	3	SW04	30.027538	-90.113269	8-Oct-05	07:55	72.9	22.7		11.5	0.65	8.45
	4	SW04	30.027100	-90.113483	9-Oct-05	08:08	74.3	23.49		10.7	0.59	8.57
	5	SW04	30.027100	-90.113483	10-Oct-05	08:15	73.8	23.2	8.42	9.6	0.53	8.24
	6	SW04	30.027100	-90.113483	11-Oct-05	08:00	74.8	23.80	8.5	9.30	0.51	8.19
	7	SW04	30.027100	-90.113483	12-Oct-05	08:07	74.3	23.50	8.6	10.10	0.56	7.47
	8	SW04	30.027100	-90.113483	13-Oct-05	08:17	74.7	23.70	9.02	9.70	0.54	8.07
	9	SW04	30.027100	-90.113483	14-Oct-05	09:00	75.2	24.00	9.40	10.10	0.56	8.15
	10	SW04	30.027100	-90.113483	15-Oct-05	08:05	72.9	22.70	9.65	10.10	0.56	8.50
	11	SW04	30.027100	-90.113483	16-Oct-05	08:05	74.3	23.50	9.38	11.10	0.62	8.74
	12	SW04	30.027100	-90.113483	17-Oct-05	08:10	72.1	22.30	10.09	11.70	0.66	8.12
	13	SW04	30.027100	-90.113483	18-Oct-05	08:22	73.2	22.90	10.09	11.30	0.64	8.02
	14	SW04	30.027100	-90.113483	19-Oct-05	08:22	73.8	23.20	10.55	11.90	0.68	8.38
	15	SW04	30.027100	-90.113483	20-Oct-05	08:10	74.5	23.60	11.13	12.50	0.72	8.07
	16	SW04	30.027100	-90.113483	21-Oct-05	08:10	75.2	24.00	11.22	11.60	0.66	8.35
	17	SW04	30.027100	-90.113483	22-Oct-05	08:05	71.6	22.00	11.49	12.00	0.68	8.12
	18	SW04	30.027100	-90.113483	23-Oct-05	08:05	69.6	20.90	11.35	12.00	0.68	8.21
	19	SW04	30.027100	-90.113483	24-Oct-05	08:35	63.5	17.50	11.32	12.30	0.70	7.70
	20	SW04	30.027100	-90.113483	25-Oct-05	08:40	64.2	17.90	11.41	12.40	0.71	8.13
	21	SW04	30.027100	-90.113483	26-Oct-05	08:20	56.8	13.80	10.50	11.40	0.63	9.40
	22	SW04	30.027100	-90.113483	27-Oct-05	08:10	60.6	15.90	11.28	12.60	0.71	8.82
	23	SW04	30.027100	-90.113483	28-Oct-05	08:15	58.6	14.80	11.13	11.81	0.70	9.14
	24	SW04	30.027100	-90.113483	29-Oct-05	08:04	59.9	15.50	11.84	13.80	0.79	8.19
	25	SW04	30.027100	-90.113483	30-Oct-05	07:55	65.1	18.40	11.94	14.50	0.83	8.77
	26	SW04	30.027100	-90.113483	31-Oct-05	08:15	63.0	17.20	12.38	14.80	0.85	9.07



Table 11 Continued: Field Data

Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
Orleans (Canal Outfall)	1	SW05	30.03	-90.097234	6-Oct-05	14:30	85.5	29.7	6	9.8	0.5	9.3
	2	SW05	30.03	-90.097234	7-Oct-05	11:30	76.3	24.6		11.5	0.65	7.86
	3	SW05	30.028433	-90.097234	8-Oct-05	09:05	72.5	22.5		11.4	0.64	8.75
	4	SW05	30.028150	-90.097150	9-Oct-05	09:35	72.9	22.7		9.9	0.55	8.92
	5	SW05	30.028150	-90.097150	10-Oct-05	09:30	74.8	23.8	8.3	9.4	0.52	8.78
	6	SW05	30.028150	-90.097150	11-Oct-05	09:10	74.3	23.50	8.3	9.40	0.52	8.48
	7	SW05	30.028150	-90.097150	12-Oct-05	09:25	75.7	24.30	9.5	10.00	0.56	7.26
	8	SW05	30.028150	-90.097150	13-Oct-05	09:33	75.6	24.20	8.76	9.60	0.35	8.19
	9	SW05	30.028150	-90.097150	14-Oct-05	10:20	78.1	25.60	8.66	9.50	0.53	8.02
	10	SW05	30.028150	-90.097150	15-Oct-05	09:15	72.9	22.70	9.21	9.70	0.54	8.25
	11	SW05	30.028150	-90.097150	16-Oct-05	09:22	74.3	23.50	9.38	10.90	0.61	8.38
	12	SW05	30.028150	-90.097150	17-Oct-05	09:20	72.1	22.30	10.72	12.30	0.70	7.72
	13	SW05	30.028150	-90.097150	18-Oct-05	09:25	72.5	22.50	11.23	12.50	0.71	7.97
	14	SW05	30.028150	-90.097150	19-Oct-05	09:25	73.6	23.10	11.52	12.90	0.74	8.37
	15	SW05	30.028150	-90.097150	20-Oct-05	09:05	74.7	23.70	11.52	12.90	0.74	8.46
	16	SW05	30.028150	-90.097150	21-Oct-05	09:25	76.5	24.70	11.42	11.80	0.67	8.63
	17	SW05	30.028150	-90.097150	22-Oct-05	09:10	71.4	21.90	11.87	12.60	0.72	7.72
	18	SW05	30.028150	-90.097150	23-Oct-05	09:20	69.6	20.90	11.52	12.40	0.69	8.02
	19	SW05	30.028150	-90.097150	24-Oct-05	09:30	60.4	15.80	11.41	12.30	0.70	8.58
	20	SW05	30.028150	-90.097150	25-Oct-05	09:30	60.8	16.00	11.04	12.20	0.70	8.98
	21	SW05	30.028150	-90.097150	26-Oct-05	10:10	62.8	17.10	10.84	11.50	0.64	9.46
	22	SW05	30.028150	-90.097150	27-Oct-05	09:40	62.2	16.80	10.99	12.30	0.70	8.97
	23	SW05	30.028150	-90.097150	28-Oct-05	09:25	60.3	15.70	11.42	12.50	0.71	9.25
	24	SW05	30.028150	-90.097150	29-Oct-05	08:52	59.7	15.40	11.82	13.90	0.79	9.41
	25	SW05	30.028150	-90.097150	30-Oct-05	09:10	62.4	16.90	10.67	12.90	0.73	9.50
	26	SW05	30.028150	-90.097150	31-Oct-05	09:20	64.6	18.10	12.09	14.50	0.84	9.38
P/S #6 (Pump Outflow)	1	SW06	29.99	-90.124237	6-Oct-05	11:45	83.7	28.7	5.3	7.28	0.5	3.03
	2	SW06	29.99	-90.124237	7-Oct-05	10:20	77.9	25.5		3.85	0.19	7.27
	3	SW06	29.987455	-90.124237	8-Oct-05	11:51	77.4	25.2		3.39	0.16	7.93
	4	SW06	30.987500	-90.124233	9-Oct-05	12:25	80.2	26.8		3.54	0.17	8.15
	5	SW06	30.987500	-90.124233	10-Oct-05	12:05	80.8	27.1	2.26	2.93	0.14	8.73
	6	SW06	30.987500	-90.124233	11-Oct-05	12:15	82.4	28.00	3.8	4.60	0.23	8.28
	7	SW06	30.987500	-90.124233	12-Oct-05	12:20	82.4	28.00	3.0	3.95	0.20	7.81
	8	SW06	30.987500	-90.124233	13-Oct-05	12:15	82.4	28.00	2.48	3.14	0.15	8.08
	9	SW06	30.987500	-90.124233	14-Oct-05	12:35	82.0	27.80	2.47	3.10	0.15	7.76
	10	SW06	30.987500	-90.124233	15-Oct-05	12:05	81.1	27.30	2.46	3.04	0.15	7.93
	11	SW06	30.987500	-90.124233	16-Oct-05	12:05	81.0	27.20	2.42	3.30	0.16	8.06
	12	SW06	30.987500	-90.124233	17-Oct-05	12:25	79.3	26.30	3.15	4.20	0.20	8.69
	13	SW06	30.987500	-90.124233	18-Oct-05	12:20						
	14	SW06	30.987500	-90.124233	19-Oct-05	12:20	80.8	27.10	2.21	2.93	0.14	8.20
	15	SW06	30.987500	-90.124233	20-Oct-05	12:05	79.5	26.40	1.45	2.01	0.09	8.27
	16	SW06	30.987500	-90.124233	21-Oct-05	12:23	81.0	27.20	2.02	2.50	0.12	8.32
	17	SW06	30.987500	-90.124233	22-Oct-05	12:00	75.2	24.00	2.43	3.08	0.15	8.05
	18	SW06	30.987500	-90.124233	23-Oct-05	11:45	75.7	24.30	1.22	1.62	0.07	7.77
	19	SW06	30.987500	-90.124233	24-Oct-05	11:30	68.1	20.04	1.18	1.69	0.07	7.27
	20	SW06	30.987500	-90.124233	25-Oct-05	11:40	69.3	20.70	1.11	1.53	0.07	7.54
	21	SW06	30.987500	-90.124233	26-Oct-05	12:11	70.7	21.50	1.04	1.43	0.06	8.56
	22	SW06	30.987500	-90.124233	27-Oct-05	11:25	70.7	21.50	1.07	1.50	0.06	8.19
	23	SW06	30.987500	-90.124233	28-Oct-05	11:10	68.4	20.20	1.99	2.73	0.13	8.39
	24	SW06	30.987500	-90.124233	29-Oct-05	10:50	67.6	19.80	1.80	2.61	0.12	9.03
	25	SW06	30.987500	-90.124233	30-Oct-05	11:16	71.6	22.00	1.41	2.03	0.09	9.37
	26	SW06	30.987500	-90.124233	31-Oct-05	11:20	70.7	21.50	2.62	3.71	0.18	8.82

Table 11 Continued: Field Data

Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
P/S #3 (Pump Outflow)	1	SW07	29.99	-90.067919	6-Oct-05	15:50	84.0	28.9		7.8	0.42	7.73
	2	SW07	29.99	-90.067919	7-Oct-05	12:40	78.4	25.8		8.53	0.45	7.8
	3	SW07	29.988805	-90.067919	8-Oct-05	10:44	75.0	23.9		7.67	0.39	8.41
	4	SW07	30.989016	-90.067950	9-Oct-05	11:20	75.9	24.4		7.92	0.41	8.52
	5	SW07	30.989016	-90.067950	10-Oct-05	10:50	77.4	25.2	6.75	7.72	0.42	8.94
	6	SW07	30.989016	-90.067950	11-Oct-05	10:41	77.5	25.30	6.6	7.65	0.40	8.85
	7	SW07	30.989016	-90.067950	12-Oct-05	10:52	77.5	25.30	6.6	7.80	0.42	7.23
	8	SW07	30.989016	-90.067950	13-Oct-05	10:55	78.3	25.70	6.60	7.29	0.39	8.33
	9	SW07	30.989016	-90.067950	14-Oct-05	11:25	79.0	26.10	6.53	7.25	0.39	8.03
	10	SW07	30.989016	-90.067950	15-Oct-05	11:25	77.7	25.40	6.63	7.21	0.38	8.04
	11	SW07	30.989016	-90.067950	16-Oct-05	10:55	77.4	25.20	6.62	7.96	0.43	8.98
	12	SW07	30.989016	-90.067950	17-Oct-05	10:47	76.3	24.60	6.70	8.00	0.43	8.10
	13	SW07	30.989016	-90.067950	18-Oct-05	10:50						
	14	SW07	30.989016	-90.067950	19-Oct-05	10:50	79.5	26.40	6.65	8.01	0.41	8.38
	15	SW07	30.989016	-90.067950	20-Oct-05	10:40	79.2	26.20	2.07	2.75	0.13	8.29
	16	SW07	30.989016	-90.067950	21-Oct-05	10:55	77.9	25.50	3.59	4.19	0.21	8.85
	17	SW07	30.989016	-90.067950	22-Oct-05	10:45	72.1	22.30	4.07	4.79	0.24	8.56
	18	SW07	30.989016	-90.067950	23-Oct-05	10:35	72.9	22.70	4.32	5.04	0.26	7.85
	19	SW07	30.989016	-90.067950	24-Oct-05	10:40	65.7	18.70	4.48	5.28	0.27	7.87
	20	SW07	30.989016	-90.067950	25-Oct-05	10:30	63.9	17.70	4.52	5.50	0.28	8.71
	21	SW07	30.989016	-90.067950	26-Oct-05	11:10	66.2	19.00	4.69	5.51	0.29	9.80
	22	SW07	30.989016	-90.067950	27-Oct-05	10:30	63.9	17.70	4.79	5.82	0.30	9.66
	23	SW07	30.989016	-90.067950	28-Oct-05	10:20	61.9	16.60	4.89	5.89	0.31	9.32
	24	SW07	30.989016	-90.067950	29-Oct-05	09:50	62.1	16.70	4.94	6.40	0.33	9.96
	25	SW07	30.989016	-90.067950	30-Oct-05	10:10	64.9	18.30	5.22	6.85	0.36	10.04
	26	SW07	30.989016	-90.067950	31-Oct-05	10:30	67.1	19.50	6.98	8.75	0.48	9.63
P/S #4 (Pump Outflow)	1	SW08	30.02	-90.070417	6-Oct-05	15:10	86.5	30.3	5.8	9.1	0.5	
	2	SW08	30.02	-90.070417	7-Oct-05	12:15	79.3	26.3		7.51	0.4	7.64
	3	SW08	30.016374	-90.070417	8-Oct-05	10:15	76.5	24.7		7.18	0.37	7.88
	4	SW08	30.016216	-90.070116	9-Oct-05	10:50	76.5	24.7		7.07	0.38	8.27
	5	SW08	30.016216	-90.070116	10-Oct-05	10:15	76.8	24.9	6.35	7.18	0.38	8.53
	6	SW08	30.016216	-90.070116	11-Oct-05	10:10	75.4	24.10	6.4	7.27	0.39	8.69
	7	SW08	30.016216	-90.070116	12-Oct-05	10:25	76.3	24.60	6.5	7.76	0.42	7.54
	8	SW08	30.016216	-90.070116	13-Oct-05	10:25	77.0	25.00	6.58	7.30	0.41	8.29
	9	SW08	30.016216	-90.070116	14-Oct-05	11:03	77.9	25.50	6.63	7.27	0.39	8.05
	10	SW08	30.016216	-90.070116	15-Oct-05	10:00	74.7	23.70	6.73	7.15	0.38	8.43
	11	SW08	30.016216	-90.070116	16-Oct-05	10:16	76.1	24.50	6.69	8.09	0.44	8.09
	12	SW08	30.016216	-90.070116	17-Oct-05	10:16	73.6	23.10	6.77	8.02	0.43	7.88
	13	SW08	30.016216	-90.070116	18-Oct-05	10:15	76.5	24.70	6.85	7.92	0.43	7.92
	14	SW08	30.016216	-90.070116	19-Oct-05	10:15	77.0	25.00	6.86	7.98	0.43	9.11
	15	SW08	30.016216	-90.070116	20-Oct-05	10:13	77.7	25.40	6.38	7.45	0.40	8.38
	16	SW08	30.016216	-90.070116	21-Oct-05	10:20	77.7	25.40	4.75	5.45	0.28	8.58
	17	SW08	30.016216	-90.070116	22-Oct-05	10:05	73.0	22.80	6.68	7.44	0.40	7.77
	18	SW08	30.016216	-90.070116	23-Oct-05	10:05	71.4	21.90	6.55	7.26	0.39	8.08
	19	SW08	30.016216	-90.070116	24-Oct-05	10:10	65.3	18.50	8.36	9.30	0.51	7.66
	20	SW08	30.016216	-90.070116	25-Oct-05	10:05	64.8	18.20	7.60	8.54	0.46	8.19
	21	SW08	30.016216	-90.070116	26-Oct-05	10:45	66.6	19.20	5.72	6.51	0.34	9.20
	22	SW08	30.016216	-90.070116	27-Oct-05	10:10	64.8	18.20	6.82	7.91	0.43	9.28
	23	SW08	30.016216	-90.070116	28-Oct-05	09:55	63.1	17.30	8.07	9.20	0.51	8.82
	24	SW08	30.016216	-90.070116	29-Oct-05	09:30	61.7	16.50	7.80	9.40	0.52	9.56
	25	SW08	30.016216	-90.070116	30-Oct-05	09:55	64.9	18.30	7.71	9.80	0.54	9.31
	26	SW08	30.016216	-90.070116	31-Oct-05	10:10	65.3	18.50	7.15	9.10	0.50	9.75

Table 11 Continued: Field Data

Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
London (Canal Outfall)	1	SW09	30.03	-90.074361	6-Oct-05	15:30	85.0	29.43	8	13.6	0.8	
	2	SW09	30.03	-90.074361	7-Oct-05	11:50	76.6	24.8		13.7	0.79	7.78
	3	SW09	30.031446	-90.074361	8-Oct-05	09:30	72.7	22.6		12.2	0.67	8.57
	4	SW09	30.031316	-90.074300	9-Oct-05	10:06	72.9	22.7		11.7	0.66	8.85
	5	SW09	30.031316	-90.074300	10-Oct-05	09:55	75.6	24.2	8.72	9.8	0.55	8.69
	6	SW09	30.031316	-90.074300	11-Oct-05	09:31	74.3	23.50	9.6	10.50	0.59	8.49
	7	SW09	30.031316	-90.074300	12-Oct-05	09:45	75.0	23.90	8.6	10.10	0.56	7.30
	8	SW09	30.031316	-90.074300	13-Oct-05	09:50	75.6	24.20	9.26	10.00	0.56	8.14
	9	SW09	30.031316	-90.074300	14-Oct-05	10:42	77.4	25.20	9.34	10.20	0.57	8.26
	10	SW09	30.031316	-90.074300	15-Oct-05	09:37	72.5	22.50	9.93	9.90	0.55	8.15
	11	SW09	30.031316	-90.074300	16-Oct-05	09:40	74.7	23.70	10.37	12.10	0.69	8.71
	12	SW09	30.031316	-90.074300	17-Oct-05	09:40	72.3	22.40	10.97	12.60	0.72	8.07
	13	SW09	30.031316	-90.074300	18-Oct-05	09:50	73.9	23.30	11.05	12.30	0.70	8.04
	14	SW09	30.031316	-90.074300	19-Oct-05	09:50	74.7	23.70	12.30	13.70	0.79	8.13
	15	SW09	30.031316	-90.074300	20-Oct-05	09:40	75.4	24.10	9.86	10.60	0.60	8.44
	16	SW09	30.031316	-90.074300	21-Oct-05	09:50	77.4	25.20	11.51	11.90	0.68	9.01
	17	SW09	30.031316	-90.074300	22-Oct-05	09:40	72.3	22.40	10.75	11.50	0.65	7.63
	18	SW09	30.031316	-90.074300	23-Oct-05	09:35	70.5	21.40	12.01	12.60	0.72	7.78
	19	SW09	30.031316	-90.074300	24-Oct-05	09:50	62.1	16.70	11.69	13.00	0.71	8.38
	20	SW09	30.031316	-90.074300	25-Oct-05	09:50	62.4	16.90	10.58	11.70	0.60	8.71
	21	SW09	30.031316	-90.074300	26-Oct-05	10:30	64.4	18.00	11.07	11.90	0.67	9.17
	22	SW09	30.031316	-90.074300	27-Oct-05	09:55	63.5	17.50	10.68	12.00	0.68	9.03
	23	SW09	30.031316	-90.074300	28-Oct-05	09:40	60.1	15.60	11.61	12.70	0.73	9.54
	24	SW09	30.031316	-90.074300	29-Oct-05	09:06	52.7	11.52	11.52	13.50	0.77	9.38
	25	SW09	30.031316	-90.074300	30-Oct-05	09:17	63.0	17.20	13.28	16.10	0.94	9.42
	26	SW09	30.031316	-90.074300	31-Oct-05	09:45	64.6	18.10	11.91	14.50	0.83	9.41

Table 11 Continued: Field Data												
Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
IHNC (Canal “Outfall”)	1	SW10	30.03	-90.035035	6-Oct-05	16:00	85.9	29.92	10	15.7	0.9	9.22
	2	SW10	30.03	-90.035035	7-Oct-05	09:25	78.9	26.07	10	15.5	0.9	9.82
	3	SW10	30.031183	-90.022716	8-Oct-05	08:17	77.5	25.3	10	16.1	0.9	9.04
	4	SW10	30.031183	-90.022716	9-Oct-05	08:45	78.1	25.6	9	15.1	0.90	8.09
	5	SW10	30.031183	-90.022716	10-Oct-05	08:43	77.2	25.12	10	15.7	0.90	7.33
	6	SW10	30.031183	-90.022716	11-Oct-05	08:30	77.4	25.20	8	13.40	0.80	9.12
	7	SW10	30.031183	-90.022716	12-Oct-05	08:30	78.4	25.75	9.0	13.90	0.80	7.25
	8	SW10	30.031183	-90.022716	13-Oct-05	08:32	77.4	25.22	7.00	11.70	0.70	9.68
	9	SW10	30.031183	-90.022716	14-Oct-05	09:45	79.6	26.43	7.00	11.90	0.70	8.66
	10	SW10	30.031183	-90.022716	15-Oct-05	08:14	77.6	25.33	7.00	11.20	0.60	9.50
	11	SW10	30.031183	-90.022716	16-Oct-05	08:23	77.4	25.23	8.00	12.30	0.70	11.74
	12	SW10	30.031183	-90.022716	17-Oct-05	08:30	76.3	24.63	8.00	13.40	0.80	9.89
	13	SW10	30.031183	-90.022716	18-Oct-05	08:37	75.8	24.33	9.00	14.10	0.80	7.59
	14	SW10	30.031183	-90.022716	19-Oct-05	08:37	76.2	24.53	9.00	14.40	0.80	10.74
	15	SW10	30.031183	-90.022716	20-Oct-05	09:28	76.5	24.70	9.00	15.00	0.90	7.30
	16	SW10	30.031183	-90.022716	21-Oct-05	08:20	77.9	25.50	14.00	23.00	1.40	7.20
	17	SW10	30.031183	-90.022716	22-Oct-05	08:18	76.3	24.60	14.00	23.00	1.40	5.80
	18	SW10	30.031183	-90.022716	23-Oct-05	08:34	75.0	23.90	14.00	23.00	1.40	8.70
	19	SW10	30.031183	-90.022716	24-Oct-05	08:52	68.7	20.40	9.00	15.00	0.90	8.40
	20	SW10	30.031183	-90.022716	25-Oct-05	08:35	66.6	19.20	9.00	14.00	0.80	7.80
	21	SW10	30.031183	-90.022716	26-Oct-05	09:45	68.9	20.50	12.00	19.00	1.10	6.50
	22	SW10	30.031183	-90.022716	27-Oct-05	09:03	68.4	20.20	12.00	20.00	1.20	6.70
	23	SW10	30.031183	-90.022716	28-Oct-05	09:06	64.8	18.20	10.00	17.00	1.20	7.60
	24	SW10	30.031183	-90.022716	29-Oct-05	08:40	64.8	18.20	10.00	17.00	1.20	7.60
	25	SW10	30.031183	-90.022716	30-Oct-05	08:50	64.9	18.25	12.00	19.30	1.20	8.57
	26	SW10	30.031183	-90.022716	31-Oct-05	08:53	66.4	19.10	10.00	16.00	1.10	7.70
P/S #19 (Pump Outflow)	1	SW11	29.98	-90.022188	6-Oct-05	16:55	82.9	28.3		12.3	0.71	8.38
	2	SW11	29.98	-90.022188	7-Oct-05	12:16	79.9	26.6	8	9.99	0.7	10.61
	3	SW11	29.981933	-90.022716	8-Oct-05	11:13	77.4	25.2	7	10.8	0.6	8.56
	4	SW11	29.981933	-90.022716	9-Oct-05	11:07	79.4	26.33	7	11.8	0.70	8.62
	5	SW11	29.981933	-90.022716	10-Oct-05	12:17	80.1	26.7	8	13.3	0.80	8.34
	6	SW11	29.981933	-90.022716	11-Oct-05	11:35	81.4	27.44	6.2	9.79	0.50	8.10
	7	SW11	29.981933	-90.022716	12-Oct-05	12:24	81.2	27.36	7.0	12.00	0.70	11.15
	8	SW11	29.981933	-90.022716	13-Oct-05	11:25	81.1	27.28	6.20	9.77	0.50	9.69
	9	SW11	29.981933	-90.022716	14-Oct-05	12:28	80.4	26.88	5.20	8.21	0.50	8.23
	10	SW11	29.981933	-90.022716	15-Oct-05	10:35	79.8	26.57	6.00	10.30	0.60	8.33
	11	SW11	29.981933	-90.022716	16-Oct-05	10:55	79.8	26.57	7.00	11.80	0.70	7.96
	12	SW11	29.981933	-90.022716	17-Oct-05	10:52	78.7	25.93	8.00	12.70	0.70	8.22
	13	SW11	29.981933	-90.022716	18-Oct-05	11:15	83.1	28.40	2.78	3.62	0.18	9.02
	14	SW11	29.981933	-90.022716	19-Oct-05	11:15	80.3	26.85	11.00	17.70	1.10	9.15
	15	SW11	29.981933	-90.022716	20-Oct-05	12:08	78.8	26.00	10.00	17.00	1.00	6.40
	16	SW11	29.981933	-90.022716	21-Oct-05	11:13	79.5	26.40	10.00	17.00	1.00	6.10
	17	SW11	29.981933	-90.022716	22-Oct-05	11:00	76.5	24.70	10.00	16.00	1.00	7.60
	18	SW11	29.981933	-90.022716	23-Oct-05	11:15	75.0	23.87	9.00	14.60	0.90	12.49
	19	SW11	29.981933	-90.022716	24-Oct-05	11:35	69.3	20.70	7.00	11.00	0.60	8.00
	20	SW11	29.981933	-90.022716	25-Oct-05	11:15	71.8	22.10	3.70	5.90	0.30	5.50
	21	SW11	29.981933	-90.022716	26-Oct-05	12:45	70.7	21.50	9.00	15.00	0.90	6.20
	22	SW11	29.981933	-90.022716	27-Oct-05	11:32	69.1	20.60	11.00	18.00	1.10	6.80
	23	SW11	29.981933	-90.022716	28-Oct-05	11:30	66.9	19.40	8.30	9.70	1.00	7.20
	24	SW11	29.981933	-90.022716	29-Oct-05	11:30	66.9	19.40	8.30	9.70	1.00	7.20
	25	SW11	29.981933	-90.022716	30-Oct-05	11:15	71.2	21.79	7.00	11.40	0.60	6.70
	26	SW11	29.981933	-90.022716	31-Oct-05	11:57	69.8	21.00	11.00	17.00	1.10	7.10

Table 11 Continued: Field Data

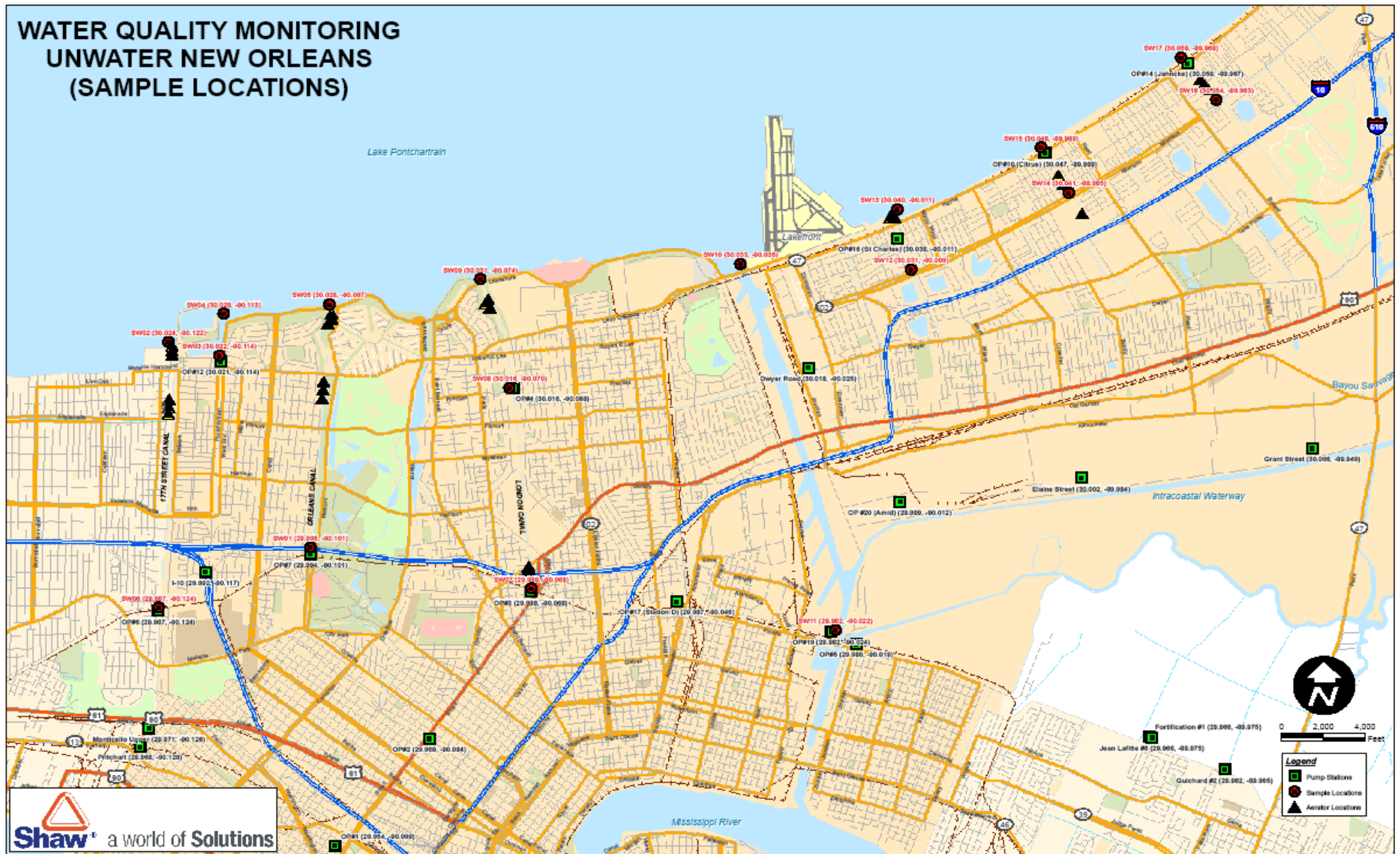
Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
P/S #16 (Upstream)	1	SW12	30.03	-90.009279	6-Oct-05	17:25	84.2	29		6.96	0.37	8.13
	2	SW12	30.03	-90.009279	7-Oct-05	11:37	77.9	25.5	4.8	7.6	0.4	9.03
	3	SW12	30.031100	-90.009066	8-Oct-05	10:34	74.3	23.5	4.7	7.4	0.4	8.14
	4	SW12	30.031100	-90.009066	9-Oct-05	10:38	76.6	24.75	3.6	5.72	0.30	9.05
	5	SW12	30.031100	-90.009066	10-Oct-05	11:46	77.8	25.46	4.5	7.2	0.40	12.32
	6	SW12	30.031100	-90.009066	11-Oct-05	11:03	78.7	25.97	3.7	5.81	0.30	7.00
	7	SW12	30.031100	-90.009066	12-Oct-05	11:54	79.6	26.43	4.1	6.47	0.30	11.83
	8	SW12	30.031100	-90.009066	13-Oct-05	10:59	81.1	27.26	4.00	6.34	0.30	9.63
	9	SW12	30.031100	-90.009066	14-Oct-05	11:45	80.3	26.83	3.90	6.14	0.30	11.23
	10	SW12	30.031100	-90.009066	15-Oct-05	10:08	79.5	26.40	4.00	6.30	0.30	8.78
	11	SW12	30.031100	-90.009066	16-Oct-05	10:22	78.9	26.04	4.00	6.36	0.30	9.00
	12	SW12	30.031100	-90.009066	17-Oct-05	10:27	77.0	24.98	4.10	6.53	0.40	11.31
	13	SW12	30.031100	-90.009066	18-Oct-05	10:30	77.3	25.14	4.00	6.42	0.30	5.02
	14	SW12	30.031100	-90.009066	19-Oct-05	10:30	79.1	26.17	3.90	6.23	0.30	9.13
	15	SW12	30.031100	-90.009066	20-Oct-05	11:42	77.2	25.10	3.50	5.60	0.30	7.20
	16	SW12	30.031100	-90.009066	21-Oct-05	10:50	77.5	25.30	2.60	4.10	0.20	7.40
	17	SW12	30.031100	-90.009066	22-Oct-05	10:32	74.7	23.70	3.10	4.90	0.30	8.20
	18	SW12	30.031100	-90.009066	23-Oct-05	10:48	75.3	24.03	3.50	5.59	0.30	11.30
	19	SW12	30.031100	-90.009066	24-Oct-05	10:57	64.6	18.10	3.00	4.70	0.20	7.60
	20	SW12	30.031100	-90.009066	25-Oct-05	10:52	65.7	18.70	2.40	3.80	0.20	7.30
	21	SW12	30.031100	-90.009066	26-Oct-05	12:05	65.5	18.60	2.20	3.40	0.20	11.80
	22	SW12	30.031100	-90.009066	27-Oct-05	11:02	67.5	19.70	2.00	3.10	0.20	9.30
	23	SW12	30.031100	-90.009066	28-Oct-05	11:26	65.5	18.60	1.60	2.50	0.10	8.60
	24	SW12	30.031100	-90.009066	29-Oct-05	11:05	65.5	18.60	1.60	2.50	0.10	8.60
	25	SW12	30.031100	-90.009066	30-Oct-05	10:58	69.3	20.72	1.50	2.33	0.10	8.23
	26	SW12	30.031100	-90.009066	31-Oct-05	11:14	70.2	21.20	1.70	2.60	0.10	9.30
P/S #16 (Canal Outfall)	1	SW13	30.04	-90.011092	6-Oct-05	16:40	86.5	30.29	10	15.4	0.9	8.7
	2	SW13	30.04	-90.011092	7-Oct-05	09:48	75.6	24.22	9	15.2	0.9	10.55
	3	SW13	30.039000	-90.011783	8-Oct-05	08:42	71.2	21.79	9	13.9	0.8	11.26
	4	SW13	30.039000	-90.011783	9-Oct-05	09:15	71.9	22.18	8	12.2	0.70	8.39
	5	SW13	30.039000	-90.011783	10-Oct-05	09:50	74.1	23.41	8	12.6	0.70	8.52
	6	SW13	30.039000	-90.011783	11-Oct-05	09:00	74.5	23.63	7	11.70	0.70	9.90
	7	SW13	30.039000	-90.011783	12-Oct-05	09:03	76.3	24.60	8.0	13.10	0.80	10.77
	8	SW13	30.039000	-90.011783	13-Oct-05	08:50	76.8	24.87	7.00	11.60	0.70	9.86
	9	SW13	30.039000	-90.011783	14-Oct-05	10:06	78.7	25.94	8.00	12.20	0.70	10.29
	10	SW13	30.039000	-90.011783	15-Oct-05	08:30	73.1	22.86	8.00	12.40	0.70	10.58
	11	SW13	30.039000	-90.011783	16-Oct-05	08:42	73.8	23.24	9.00	13.80	0.80	12.75
	12	SW13	30.039000	-90.011783	17-Oct-05	08:50	72.1	22.27	8.00	13.60	0.80	8.28
	13	SW13	30.039000	-90.011783	18-Oct-05	09:00	74.8	23.77	8.00	13.40	0.80	8.54
	14	SW13	30.039000	-90.011783	19-Oct-05	09:00	75.0	23.88	8.00	13.60	0.80	9.76
	15	SW13	30.039000	-90.011783	20-Oct-05	09:51	76.3	24.60	9.00	14.00	0.80	7.40
	16	SW13	30.039000	-90.011783	21-Oct-05	08:52	77.0	25.00	9.00	15.00	0.90	7.60
	17	SW13	30.039000	-90.011783	22-Oct-05	08:46	72.0	22.20	10.00	16.00	0.90	7.60
	18	SW13	30.039000	-90.011783	23-Oct-05	09:10	68.9	20.49	9.00	14.40	0.80	9.87
	19	SW13	30.039000	-90.011783	24-Oct-05	09:14	60.1	15.60	9.00	14.00	0.80	9.50
	20	SW13	30.039000	-90.011783	25-Oct-05	08:58	59.4	15.20	9.00	14.00	0.80	8.90
	21	SW13	30.039000	-90.011783	26-Oct-05	10:16	60.1	15.60	10.00	16.00	0.90	9.80
	22	SW13	30.039000	-90.011783	27-Oct-05	09:20	62.4	16.90	10.00	15.00	0.90	8.60
	23	SW13	30.039000	-90.011783	28-Oct-05	09:23	58.1	14.50	8.00	12.00	0.90	9.30
	24	SW13	30.039000	-90.011783	29-Oct-05	09:10	58.1	14.50	8.00	12.00	0.90	9.30
	25	SW13	30.039000	-90.011783	30-Oct-05	09:15	61.3	16.25	11.00	17.90	1.10	8.43
	26	SW13	30.039000	-90.011783	31-Oct-05	09:15	65.5	18.60	10.00	15.00	1.00	7.30

Table 11 Continued: Field Data												
Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C	g/L	mS/cm	%	mg/L
P/S #10 (Upstream)	1	SW14	30.04	-89.985164	6-Oct-05	17:46	83.5	28.6		7.77	0.42	7.65
	2	SW14	30.04	-89.985164	7-Oct-05	11:17	77.9	25.52	5.5	8.68	0.5	12.5
	3	SW14	30.040966	-89.985033	8-Oct-05	10:20	74.4	23.57	4.8	7.6	0.4	13.25
	4	SW14	30.040966	-89.985033	9-Oct-05	10:25	75.5	24.17	6	9.8	0.50	8.67
	5	SW14	30.040966	-89.985033	10-Oct-05	11:27	76.6	24.79	6	10	0.60	10.53
	6	SW14	30.040966	-89.985033	11-Oct-05	10:46	77.2	25.11	6	9.70	0.50	8.65
	7	SW14	30.040966	-89.985033	12-Oct-05	11:38	77.6	25.32	6.0	10.20	0.60	7.06
	8	SW14	30.040966	-89.985033	13-Oct-05	10:25	78.1	25.63	6.00	10.00	0.60	7.98
	9	SW14	30.040966	-89.985033	14-Oct-05	11:28	80.4	26.90	5.50	8.79	0.50	9.75
	10	SW14	30.040966	-89.985033	15-Oct-05	09:53	77.5	25.25	4.70	7.49	0.40	9.01
	11	SW14	30.040966	-89.985033	16-Oct-05	09:55	79.1	26.15	5.00	8.08	0.40	11.10
	12	SW14	30.040966	-89.985033	17-Oct-05	10:15	77.0	24.98	4.90	7.73	0.40	7.35
	13	SW14	30.040966	-89.985033	18-Oct-05	10:14	76.2	24.55	5.20	8.33	0.50	8.31
	14	SW14	30.040966	-89.985033	19-Oct-05	10:14	82.8	28.24	4.50	7.07	0.40	6.04
	15	SW14	30.040966	-89.985033	20-Oct-05	11:27	78.3	25.70	3.20	5.20	0.30	5.20
	16	SW14	30.040966	-89.985033	21-Oct-05	10:17	79.2	26.20	2.80	4.30	0.20	4.10
	17	SW14	30.040966	-89.985033	22-Oct-05	10:12	75.4	24.10	3.20	5.10	0.30	6.60
	18	SW14	30.040966	-89.985033	23-Oct-05	10:30	73.7	23.18	3.40	5.45	0.30	8.38
	19	SW14	30.040966	-89.985033	24-Oct-05	10:33	64.4	18.00	3.60	5.70	0.30	7.40
	20	SW14	30.040966	-89.985033	25-Oct-05	10:29	63.9	17.70	2.70	4.30	0.20	6.60
	21	SW14	30.040966	-89.985033	26-Oct-05	11:42	66.9	19.40	2.60	4.10	0.20	8.40
	22	SW14	30.040966	-89.985033	27-Oct-05	10:41	67.3	19.60	2.40	3.80	0.20	9.20
	23	SW14	30.040966	-89.985033	28-Oct-05	10:55	65.3	18.50	2.20	3.40	0.20	8.30
	24	SW14	30.040966	-89.985033	29-Oct-05	10:55	65.3	18.50	2.20	3.40	0.20	8.30
	25	SW14	30.040966	-89.985033	30-Oct-05	10:35	68.6	20.34	1.70	2.64	0.10	9.80
	26	SW14	30.040966	-89.985033	31-Oct-05	10:55	69.1	20.60	1.60	2.50	0.10	9.70
P/S #10 (Pump Outflow to Lake)	1	SW15	30.05	-89.989183	6-Oct-05	17:15	85.5	29.72	10	16	0.9	8.8
	2	SW15	30.05	-89.989183	7-Oct-05	10:10	75.4	24.1	10	15.6	0.9	12.34
	3	SW15	30.047633	-89.989100	8-Oct-05	09:20	72.1	22.28	8	9.99	0.8	12.02
	4	SW15	30.047633	-89.989100	9-Oct-05	09:35	71.6	22	7	11.4	0.60	9.11
	5	SW15	30.047633	-89.989100	10-Oct-05	10:19	74.9	23.86	8	12.5	0.70	9.85
	6	SW15	30.047633	-89.989100	11-Oct-05	09:25	73.5	23.06	6	10.30	0.60	8.00
	7	SW15	30.047633	-89.989100	12-Oct-05	09:30	77.2	25.13	8.0	12.60	0.70	11.50
	8	SW15	30.047633	-89.989100	13-Oct-05	09:13	76.5	24.72	8.00	12.70	0.70	8.62
	9	SW15	30.047633	-89.989100	14-Oct-05	10:32	79.3	26.27	8.00	12.60	0.70	8.23
	10	SW15	30.047633	-89.989100	15-Oct-05	08:51	73.5	23.04	8.00	12.40	0.70	10.58
	11	SW15	30.047633	-89.989100	16-Oct-05	09:00	73.7	23.15	9.00	14.20	0.80	12.46
	12	SW15	30.047633	-89.989100	17-Oct-05	09:10	71.3	21.83	9.00	14.00	0.80	9.00
	13	SW15	30.047633	-89.989100	18-Oct-05	09:22	75.1	23.93	6.00	10.30	0.60	7.12
	14	SW15	30.047633	-89.989100	19-Oct-05	09:22	75.7	24.27	9.00	14.10	0.80	8.56
	15	SW15	30.047633	-89.989100	20-Oct-05	10:15	75.7	24.30	9.00	15.00	0.80	6.60
	16	SW15	30.047633	-89.989100	21-Oct-05	09:17	78.1	25.60	3.90	6.20	0.23	4.80
	17	SW15	30.047633	-89.989100	22-Oct-05	09:07	73.0	22.80	10.00	15.00	0.90	7.20
	18	SW15	30.047633	-89.989100	23-Oct-05	09:26	67.6	19.80	9.00	14.30	0.80	9.01
	19	SW15	30.047633	-89.989100	24-Oct-05	09:35	64.9	18.30	3.30	5.30	0.30	8.10
	20	SW15	30.047633	-89.989100	25-Oct-05	09:23	63.1	17.30	4.00	6.30	0.30	7.80
	21	SW15	30.047633	-89.989100	26-Oct-05	10:43	60.1	15.60	10.00	15.00	0.90	9.90
	22	SW15	30.047633	-89.989100	27-Oct-05	09:42	60.6	15.90	10.00	16.00	0.90	8.30
	23	SW15	30.047633	-89.989100	28-Oct-05	10:00	61.5	16.40	4.00	6.30	0.40	10.10
	24	SW15	30.047633	-89.989100	29-Oct-05	09:32	61.5	16.40	4.00	6.30	0.40	10.10
	25	SW15	30.047633	-89.989100	30-Oct-05	09:35	63.1	17.25	12.00	18.80	1.10	9.00
	26	SW15	30.047633	-89.989100	31-Oct-05	09:43	67.1	19.50	10.00	17.00	1.10	7.60

Table 11 Continued: Field Data

Pumping Station ID	Day	Sample No	Latitude	Longitude	Sample Date	Sample Time	Temperature		TDS	Cond	Salinity	DO
							F	C				
P/S #14 (Upstream)	1	SW16	30.05	-89.962524	6-Oct-05	18:15	83.6	28.68	7	11.3	0.6	10.27
	2	SW16	30.05	-89.962524	7-Oct-05	10:53	77.6	25.36	8	12.3	0.7	8.62
	3	SW16	30.053366	-89.962416	8-Oct-05	10:00	74.8	23.76	7	11.1	0.6	11.18
	4	SW16	30.053366	-89.962416	9-Oct-05	10:10	74.2	23.43	6	9.9	0.60	9.72
	5	SW16	30.053366	-89.962416	10-Oct-05	10:59	76.7	24.86	7	11.3	0.60	9.1
	6	SW16	30.053366	-89.962416	11-Oct-05	10:13	75.9	24.39	6	10.30	0.60	9.60
	7	SW16	30.053366	-89.962416	12-Oct-05	10:55	78.1	25.62	7.0	11.60	0.70	6.05
	8	SW16	30.053366	-89.962416	13-Oct-05	10:02	76.6	24.75	7.00	10.60	0.60	10.03
	9	SW16	30.053366	-89.962416	14-Oct-05	11:10	80.0	26.64	6.00	9.49	0.50	9.68
	10	SW16	30.053366	-89.962416	15-Oct-05	09:22	77.6	25.32	5.80	9.28	0.50	8.83
	11	SW16	30.053366	-89.962416	16-Oct-05	09:34	77.8	25.46	6.00	10.20	0.60	10.71
	12	SW16	30.053366	-89.962416	17-Oct-05	09:47	77.5	25.26	6.00	10.20	0.60	12.20
	13	SW16	30.053366	-89.962416	18-Oct-05	09:55	76.7	24.82	6.00	9.80	0.50	8.98
	14	SW16	30.053366	-89.962416	19-Oct-05	09:55	78.8	25.99	6.00	10.20	0.60	4.60
	15	SW16	30.053366	-89.962416	20-Oct-05	10:56	77.9	25.50	4.70	7.40	0.40	7.00
	16	SW16	30.053366	-89.962416	21-Oct-05	09:54	79.3	26.30	4.80	7.60	0.40	7.00
	17	SW16	30.053366	-89.962416	22-Oct-05	09:39	74.8	23.80	5.20	8.20	0.50	6.20
	18	SW16	30.053366	-89.962416	23-Oct-05	10:12	72.3	22.41	5.30	8.41	0.50	7.33
	19	SW16	30.053366	-89.962416	24-Oct-05	10:16	63.7	17.60	4.90	7.70	0.40	8.80
	20	SW16	30.053366	-89.962416	25-Oct-05	10:03	62.8	17.10	4.80	7.60	0.40	7.50
	21	SW16	30.053366	-89.962416	26-Oct-05	11:25	64.9	18.30	4.40	7.00	0.40	8.60
	22	SW16	30.053366	-89.962416	27-Oct-05	10:10	64.6	18.10	4.10	6.50	0.30	9.50
	23	SW16	30.053366	-89.962416	28-Oct-05	10:40	64.0	17.80	4.90	7.80	0.50	8.00
	24	SW16	30.053366	-89.962416	29-Oct-05	10:18	64.0	17.80	4.90	7.80	0.50	8.00
	25	SW16	30.053366	-89.962416	30-Oct-05	10:05	68.5	20.26	3.00	4.64	0.20	12.82
	26	SW16	30.053366	-89.962416	31-Oct-05	10:25	70.3	21.30	2.80	4.30	0.20	14.50
P/S #14 (Pump Outflow to Lake)	1	SW17	30.06	-89.967649	6-Oct-05	17:45	84.2	28.99	10	15.8	0.9	8.2
	2	SW17	30.06	-89.967649	7-Oct-05	10:37	76.6	24.8	9	14.7	0.9	9.98
	3	SW17	30.059400	-89.967366	8-Oct-05	09:40	73.2	22.9	8	13.1	0.8	9.25
	4	SW17	30.059400	-89.967366	9-Oct-05	09:53	72.5	22.51	7	11.1	0.60	8.13
	5	SW17	30.059400	-89.967366	10-Oct-05	10:39	75.5	24.14	8	13.4	0.80	7.49
	6	SW17	30.059400	-89.967366	11-Oct-05	09:50	76.3	24.62	8	12.50	0.70	7.30
	7	SW17	30.059400	-89.967366	12-Oct-05	10:32	77.5	25.26	9.0	14.30	0.80	9.11
	8	SW17	30.059400	-89.967366	13-Oct-05	09:34	76.7	24.86	8.00	13.00	0.80	10.08
	9	SW17	30.059400	-89.967366	14-Oct-05	10:53	80.2	26.77	6.00	10.20	0.60	7.25
	10	SW17	30.059400	-89.967366	15-Oct-05	09:10	75.2	23.98	8.00	12.80	0.70	9.98
	11	SW17	30.059400	-89.967366	16-Oct-05	09:18	74.4	23.53	9.00	14.30	0.80	10.24
	12	SW17	30.059400	-89.967366	17-Oct-05	09:31	73.5	23.06	9.00	13.90	0.80	11.48
	13	SW17	30.059400	-89.967366	18-Oct-05	09:40	77.0	24.99	6.00	9.50	0.50	7.46
	14	SW17	30.059400	-89.967366	19-Oct-05	09:40	76.8	24.90	6.00	9.10	0.50	10.03
	15	SW17	30.059400	-89.967366	20-Oct-05	10:36	78.1	25.60	9.00	15.00	0.90	3.50
	16	SW17	30.059400	-89.967366	21-Oct-05	09:37	77.0	25.00	10.00	15.00	0.90	6.10
	17	SW17	30.059400	-89.967366	22-Oct-05	09:25	74.3	23.50	10.00	15.00	0.90	6.40
	18	SW17	30.059400	-89.967366	23-Oct-05	09:55	70.1	21.14	9.00	14.20	0.80	8.55
	19	SW17	30.059400	-89.967366	24-Oct-05	09:55	61.0	16.10	9.00	14.00	0.80	9.10
	20	SW17	30.059400	-89.967366	25-Oct-05	09:45	64.4	18.00	5.10	8.10	0.40	8.00
	21	SW17	30.059400	-89.967366	26-Oct-05	11:08	62.2	16.80	9.00	15.00	0.90	8.70
	22	SW17	30.059400	-89.967366	27-Oct-05	09:57	61.2	16.20	10.00	16.00	0.90	8.20
	23	SW17	30.059400	-89.967366	28-Oct-05	10:20	64.2	17.90	3.60	5.70	0.40	8.80
	24	SW17	30.059400	-89.967366	29-Oct-05	09:55	60.3	15.70	9.00	14.00	1.00	10.20
	25	SW17	30.059400	-89.967366	30-Oct-05	09:55	65.7	18.70	12.00	18.80	1.10	8.50
	26	SW17	30.059400	-89.967366	31-Oct-05	10:07	66.0	18.90	10.00	16.00	1.10	8.50

Figure 1: Map of Sample Sites, Pumping Stations Locations, and Aerator Locations





## APPENDIX A

### Water Quality Management Plan

# **Water Quality Management Plan for Protecting Lake Pontchartrain during U.S. Army Corps of Engineers’ Unwatering Mission following Hurricanes Katrina and Rita, Orleans Parish, Louisiana**

## **Introduction**

The U.S. Army Corps of Engineers (USACE) is responsible for the discharge operations as part of the Unwatering Mission for the New Orleans area after Hurricanes Katrina and Rita. The USACE mission is to ensure the un-watering of the City of New Orleans and to monitor water quality during these efforts. This will allow for adjustments in ongoing operations and ensure that the designated uses of the receiving waters are not being compromised.

The U.S. Environmental Protection Agency (EPA) has proposed site/event specific limits for a number of water quality parameters for flood and/or stormwater discharges entering Lake Pontchartrain post Hurricanes Katrina and Rita during the Unwatering Mission. These include:

▪ Total Organic Carbon (TOC)	50 mg/l
▪ Chemical Oxygen Demand (COD)	100 mg/l
▪ Oil and Grease	15 mg/l
▪ pH Range	6.0 – 9.0 Standard Units
▪ Total Suspended Solids (TSS)	135 mg/l

Some historical data regarding these parameters exists in the area. The Louisiana Department of Environmental Quality (LDEQ), EPA, and U.S. Geological Survey (USGS) have collected water samples during the Unwatering Mission. Analysis of water samples for the proposed parameters at the 7 existing outfalls to Lake Pontchartrain and the Inner Harbor Navigation Canal will provide a consistent and comprehensive data set for short-term assessments and long-term trend analyses. Results will be compared to EPA monitoring guidelines shown in Table 2. There are 10 pumping stations (Table 1) that discharge to Lake Pontchartrain or the Inner Harbor Navigation Canal. These parameters are not expected to be static over the duration of the un-watering effort and future stormwater discharge events.

## **Mission Statement**

The implementation of best management practices and collection of water quality data is necessary to ensure that floodwater discharges are managed appropriately and that the designated uses of Lake Pontchartrain are not compromised.

## **Best Management Practices**

The deployment of sorbent booms with sorbent skirts at all pump discharges was implemented during initial pumping operations after Katrina and Rita. Depending on water quality conditions these booms will continue to be deployed until 31 October 2005, or until the USACE, LDEQ, and EPA mutually agree that prior to that date these devices are no longer required.

The deployment of artificial aeration devices in major canals to reduce chemical oxygen demand (COD) and support healthy dissolved oxygen concentrations in the water column is in progress. Aerators have been strategically deployed in the main canals draining to Lake Pontchartrain. Depending on water quality conditions these aerators will continue to be deployed until 31 October 2005, or until the USACE, LDEQ, and EPA mutually agree that prior to that date these devices are no longer required.

A comprehensive non-point source control program to manage movement of sediments and debris from affected areas is being conducted. These efforts are being closely coordinated with EPA, LDEQ and City of New Orleans. This program will continue until the debris removal mission is complete in Orleans Parish. Sediment characterization will provide data on potential disposal options. As the state and local agencies execute the program to clean streets, canals, and storm drains of stormwater residuals, the potential for material to enter and accumulate in the receiving waters during rainfall events will be diminished.

Table 1: Pumping Stations in Orleans Parish discharging to Lake Pontchartrain.

Pumping Station ID	Capacity (cfs)	Total Pumps
#6 (17 <sup>th</sup> Street)	9480	15
I-10	860	4
#12	1000	1
#7 (Orleans)	2690	7
#3 (London Avenue)	4260	7
#4 (London Avenue)	3720	6
#19 <sup>1</sup>	3650	5
#16 (St. Charles)	1000	4
#10 (Citrus)	1000	4
#14 (Jahncke)	1200	4

<sup>1</sup>#19 discharges to the Inner Harbor Navigation Canal (IHNC)

## Environmental Monitoring

Data were collected by EPA on water quality conditions at several locations within the City of New Orleans and Lake Pontchartrain during the time the City was in flood. LDEQ and USGS are also collecting data in Lake Pontchartrain, selected canals, and north-shore tributaries for trend analysis. The USACE will collect additional water quality samples at each pump outflow (10) and the seven outfalls into the lake. Samples will be collected at a daily interval for 30 days from 17 locations in the New Orleans area and will be analyzed for the five water quality sampling parameters previously identified. Sampling will commence on or about 30 September 2005. Contractors will be able to accommodate this schedule so that all relevant data are captured.

This sample scheme may be modified after initial baseline samples are collected in consultation with the USACE, EPA, and LDEQ. Samples will be collected, stored, and analyzed using appropriate chain of custody procedures. Analyses to be conducted include:

Table 2. Monitoring Parameters as Specified by EPA

Analyte	EPA Method	Monitoring Guidelines
Total Organic Carbon (TOC)	9060	50 mg/L
Chemical Oxygen Demand (COD)	0410.4	100 mg/L
pH	9040	6-9
Oils and Grease	1664	15 mg/L
Total Suspended Solids	0160.2	135 mg/L

Results of data collection will be transmitted as an electronic deliverable to the USACE, EPA, LDEQ, and U.S. Fish and Wildlife Service within 24-hours after collection. Daily data interpretation and daily consultation among the agencies will determine the course of action to proposed sampling schedules, best management practices in place, and additional flood and/or stormwater treatment options. Within 30 days of completion of sampling the USACE will prepare a report documenting the results of the sampling conducted and any actions that were taken during the period.

Any reports or observations of imperiled/contaminated fish and wildlife will be immediately reported to the appropriate Federal, state, and local regulatory and natural resource management agencies.

## APPENDIX B

### Daily Field Logs and Analytical Report